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S. HRG. 101-151, PT. 38

EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

PART 38

JUNE 1, AUGUST 3, AND SEPTEMBER 7, 1990

[Hearing day of July 6, 1990, was not held]

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE

36-591 WASHINGTON : 1991

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

J841-11

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CONTENTS

WITNESSES AND STATEMENTS

FRIDAY, JUNE 1, 1990

Page

Hamilton, Hon. Lee H., chairman of the Joint Economic Committee: Opening statement 1

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Edwin R. Dean, Associate Commissioner, Office of Productivity and Technology 2

FRIDAY, AUGUST 3, 1990

Hamilton, Hon. Lee H., chairman of the Joint Economic Committee: Opening statement 39

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; and Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics 40

FRIDAY, SEPTEMBER 7, 1990

Scheuer, Hon. James H., member of the Joint Economic Committee, presiding: Opening statement 83

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; and Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics 84

SUBMISSIONS FOR THE RECORD

FRIDAY, JUNE 1, 1990

Norwood, Hon. Janet L., et al.:

Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 4

Press release No. 90-279 entitled "The Employment Situation: May 1990," Bureau of Labor Statistics, Department of Labor, June 1, 1990 6

FRIDAY, AUGUST 3, 1990

Norwood, Hon. Janet L., et al.:

Addendum to statement 42

Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 44

Press release No. 90-406 entitled "The Employment Situation: July 1990," Bureau of Labor Statistics, Department of Labor, August 3, 1990. 46

Letter to Representative Solarz responding to his inquiry regarding the number of young black men in college and in prison 73

Responses to written questions posed by Representative Hamilton 77

FRIDAY, SEPTEMBER 7, 1990

Norwood, Hon. Janet L., et al.:
Page
Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 86
Press release No. 90-461 entitled "The Employment Situation: August 1990," Bureau of Labor Statistics, Department of Labor, September 7, 1990 88
Letter to Representative Scheuer responding to his interest in the mission and approach of the Department of Labor's Commission on Achieving Necessary Skills 121

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, JUNE 1, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 10:05 a.m., in room 2359, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representative Hamilton.

Also present: William Buechner, Lee Price, Jim Klumpner, and Chris Frenze, professional staff members; and Joe Cobb, minority staff director.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

This morning we are pleased to welcome Commissioner Janet Norwood of the Bureau of Labor Statistics and her colleagues before the Joint Economic Committee to testify on the employment and unemployment situation for May.

Last month the unemployment rate fell slightly to 5.3 percent, back where it was almost all of last year. There was very little growth in the private sector in May, barely up 10,000 jobs, with all the growth taking place in the service-producing sectors of the economy. Manufacturing employment fell in May by 35,000 jobs, continuing the steady decline that began last year.

In earlier hearings Commissioner Norwood testified that the employment and unemployment data for the first 4 months of this year were affected by the unusually warm weather in January and February and thus were hard to interpret. This makes the May data all the more important for understanding where our economy is today and where it is heading.

The committee will now hear from Commissioner Norwood for her testimony on the May employment data, and then we will have an opportunity for questions.

You may proceed.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND EDWIN R. DEAN, ASSOCIATE COMMISSIONER, OFFICE OF PRODUCTIVITY AND TECHNOLOGY

Mrs. NORWOOD. Thank you very much, Mr. Chairman.

As always, I have Kenneth Dalton, our price expert, and Tom Plewes, our employment expert with me, and we are very happy to be here.

Employment continued to be weak in May, and unemployment was essentially unchanged. The civilian unemployment rate was 5.3 percent, about where it has been since the autumn of 1988; the overall rate was also 5.3 percent.

Virtually all of the net job growth of about 165,000 registered by the business establishment survey was attributable to continued hiring for the decennial census. With the addition of about 145,000 temporary Census workers over the last month, there was an estimated 325,000 on May payrolls, probably the peak level for this undertaking. Employment in the private sector was unchanged over the month. Although unusually mild weather had contributed to very strong growth in the first 2 months of this year, we have had no private sector job growth over the last 3 months.

Industry employment developments in May followed a familiar pattern, with construction and factory job declines and sluggishness in retail trade and several other service-producing industries.

Construction employment continued to be weak, as hiring fell about 20,000 short of normal seasonal expectations. Employment in that industry is only 30,000 above its level of a year earlier, compared with a 180,000 gain in the prior May-to-May period and about 150,000 in each of the 3 preceding years.

The continuation of employment declines in manufacturing was most pronounced in nondurable goods, as textiles, apparel, and food processing all lost jobs in May. Within durable goods manufacturing, five industries posted declines, but May's drops were smaller than April's. Motor vehicle manufacturing continued to have small job losses, which have now totaled 50,000 over the past year. Nevertheless, manufacturing hours and overtime took a surprising jump in May—especially in autos and steel. This brought the factory workweek to its highest level in more than a year. While we should not put too much credence in a single month, employers may be paying more attention than before to cost control and to flexibility in adjusting inventories to changes in demand.

In the service-producing sector, only health services has had steady and strong growth so far this year. The industry added another 45,000 jobs in May and over the past year has accounted for nearly a quarter of the total payroll job growth, while comprising only 7 percent of overall payroll employment. In contrast, retail trade has been experiencing by far its most sluggish employment period of this long economic expansion, with no net job gains since January.

Turning to unemployment, none of the major worker groups registered significant changes in joblessness. The number of newly unemployed persons actually fell a bit in May, and the number of job losers continued to be quite stable. At this point, then, I see no particular sign that the weakening employment situation has made itself felt on the unemployment side. One major reason for this is that labor force growth has also slowed considerably in recent months.

When we look beneath the overall unemployment data, we see a great deal of diversity among the regions of the country. Regional fortunes seem to be constantly shifting. The striking stability of the national unemployment rate for nearly 2 years now has masked important regional shifts. In particular, the rate of joblessness in New England, which had been unusually low for several years, has risen nearly 2 percentage points over the past year and is now at about the national average.

The Middle Atlantic region, which includes New York, New Jersey, and Pennsylvania, has also seen a slight uptick in its relatively low rate of joblessness.

In contrast, most of the Southern region of the country—where unemployment rates had been among the highest in the Nation—has had a slow decline in joblessness. Generally speaking, the last year has seen some convergence of State and regional unemployment rates, with the worse-off areas improving and the best deteriorating.

In summary, I believe that labor market developments over recent months are now fairly clear. Employment growth has been very slow, and what growth there has been was concentrated in a very few industries. The job market has been bolstered by Census hiring. The private sector has been stagnant for the past 3 months, with job losses in construction and manufacturing. Still, relatively slow labor force expansion has served to minimize the impact of these developments on unemployment.

We would be glad to try to answer any questions you have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989									
May.....	5.0	5.2	5.2	5.2	5.2	5.2	5.2	5.1	.1
June.....	5.5	5.3	5.3	5.3	5.2	5.3	5.3	5.3	.1
July.....	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
August.....	5.1	5.3	5.3	5.2	5.2	5.3	5.2	5.2	.1
September...	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October.....	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4	.1
1990									
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February....	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	.1
March.....	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	.2
April.....	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
May.....	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.2	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
June 1990

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level at a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States Department of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 90-279

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EDT), FRIDAY, JUNE 1, 1990

THE EMPLOYMENT SITUATION: MAY 1990

Employment showed little growth in May and unemployment was about unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. Both the overall jobless rate and the civilian worker rate were 5.3 percent. There have been few changes in unemployment for over a year and a half.

Private sector employment, as reported by the survey of business establishments, was about unchanged in May, the third successive month of weakness. Government employment rose by 155,000; nearly all of this increase resulted from additional hiring of temporary workers to assist with the 1990 decennial census. Total civilian employment, as measured by the survey of households, rose by 230,000 in May, following a decline of a similar magnitude in April.

Unemployment (Household Survey Data)

The number of unemployed persons, 6.7 million, and the civilian worker unemployment rate, 5.3 percent, were essentially unchanged in May, after seasonal adjustment. The rate has hovered between 5.0 and 5.4 percent for the past 21 months. Jobless rates for all major worker groups--adult men (4.7 percent), adult women (4.6 percent), teenagers (15.5 percent), whites (4.6 percent), blacks (10.4 percent), and Hispanics (7.7 percent)--also showed little or no change in May. (See tables A-2 and A-3.)

The median duration of unemployment edged up in May to 5.4 weeks. About 1.4 million, or 1 in 5 unemployed workers, had been jobless for 15 weeks or longer, a situation that has prevailed for the past year and a half. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment rose by 230,000 in May to a seasonally adjusted level of 118.4 million. The proportion of the working-age population that is employed (the employment-population ratio) was little changed at 63.0 percent; it has fluctuated around this high level for the past 15 months. (See table A-2.)

The civilian labor force, at 125.0 million, and the labor force participation rate, at 66.6 percent, were little changed over the month.

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Apr.-May change
	1989	1990	1990			
	IV	I	Mar.	Apr.	May	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	126,098	126,300	126,498	126,543	126,643	100
Total employment 1/	119,474	119,758	120,003	119,773	119,989	216
Civilian labor force	124,394	124,619	124,829	124,886	125,004	118
Civilian employment	117,770	118,077	118,334	118,116	118,350	234
Unemployment	6,624	6,541	6,495	6,770	6,653	-117
Not in labor force	62,624	62,793	62,700	62,783	62,824	41
Discouraged workers	827	747	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	5.3	5.2	5.1	5.3	5.3	.0
All civilian workers	5.3	5.2	5.2	5.4	5.3	-0.1
Adult men	4.6	4.6	4.5	4.8	4.7	-.1
Adult women	4.8	4.7	4.7	4.8	4.6	-.2
Teenagers	15.2	14.5	14.4	14.7	15.5	.8
White	4.5	4.6	4.5	4.8	4.6	-.2
Black	11.8	10.8	10.6	10.4	10.4	.0
Hispanic origin	8.1	7.5	7.7	8.0	7.7	-.3
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment	109,398	110,221	110,427	p110,404	p110,568	p164
Goods-producing	25,581	25,603	25,606	p25,491	p25,439	p-52
Service-producing	83,816	84,617	84,821	p84,913	p85,129	p216
	Hours of work					
Average weekly hours:						
Total private	34.6	34.6	34.6	p34.6	p34.6	p.0
Manufacturing	40.7	40.7	40.8	p40.7	p41.1	p0.4
Overtime	3.7	3.6	3.6	p3.5	p4.0	p.5

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

Over the past 12 months, the labor force has increased by 1.4 million, with adult women accounting for about 70 percent of the gain. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

With the addition of an estimated 145,000 temporary census workers, total nonfarm payroll employment increased by 165,000 in May to a level of 110.6 million, after seasonal adjustment. Private payrolls, however, were little changed, following a loss of 125,000 jobs (as revised) in the previous month. (See table B-1.)

In May, the goods-producing sector suffered employment declines for the seventh month out of the last nine. Manufacturing employment fell by 35,000, with small losses throughout both the durable and nondurable goods components. Since reaching a post-recession peak in March 1989, 310,000 factory jobs have been lost; industries hardest hit include electrical equipment (-85,000), motor vehicles (-55,000), apparel (-50,000), fabricated metals (-35,000), and textile mills (-25,000). Reflecting continued weakness in the housing market, the construction industry added fewer workers than usual in May, resulting in a seasonally adjusted employment decline of 20,000. Mining employment rose slightly and has increased by 35,000 over the past year.

In the service-producing sector, government jobs rose by 155,000, with almost all of the net additions being temporary census workers. Elsewhere in the sector, employment in wholesale trade increased by 15,000 in May, with most of the increase in the nondurable goods component. For the second straight month, employment was little changed in transportation and public utilities and in finance, insurance, and real estate. Retail trade payrolls were also unchanged in May. Employment in this industry has been weak for the past 4 months, particularly in its general merchandise stores component, where 55,000 jobs have been lost. In the services industry, employment rose by only 35,000, following a small decline in the previous month. May gains were concentrated in health services, which added 45,000 workers; over the past year, health services accounted for half of the employment gain in the services industry and a third of the increase in total private jobs.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls was unchanged in May at 34.6 hours, seasonally adjusted, and has shown little movement thus far in 1990. The manufacturing workweek rose 0.4 hour in May to 41.1 hours, as factory overtime climbed 0.5 hour to 4 hours. These increases were paced by large gains in overtime hours that were principally in the durable goods sector, particularly in motor vehicles and steel. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers was unchanged in May at 130.0 (1977=100), after seasonal adjustment. The manufacturing index rose 0.7 percent to 94.8, as the increase in hours more than offset the decline in employment. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Both hourly and weekly earnings of production or nonsupervisory workers on private nonfarm payrolls rose 0.4 percent in May, on a seasonally adjusted basis. Prior to seasonal adjustment, average hourly earnings rose 2 cents to $9.98 and average weekly earnings advanced 69 cents to $344.31. Both series increased by 4.1 percent over the past 12 months. (See tables B-3 and B-4.)

Note on Establishment Survey Data

Establishment survey data will be revised based on 1989 benchmark levels with the release of August data in September. The revision will also incorporate the 1987 Standard Industrial Classification codes.

The Employment Situation for June 1990 will be released on Friday, July 6, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are calculated for 6 months, along with the introduction of new benchmarks, which are discussed at the end of the next section, and again with the release of data for October. In both surveys, revisions to data published over the previous 5 years are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
TOTAL									
Noninstitutional population[2]	187,854	189,326	189,467	187,854	188,990	189,090	189,198	189,326	189,467
Labor force[3]	124,869	125,473	126,279	125,224	126,094	126,308	126,496	126,543	126,843
Participation rate[3]	66.5	66.3	66.6	66.7	66.7	66.8	66.9	66.8	66.8
Total employed[4]	118,712	119,016	119,916	118,805	119,560	119,713	120,003	119,773	119,989
Employment-population ratio[5]	63.2	62.9	63.3	63.2	63.3	63.3	63.4	63.3	63.3
Resident Armed Forces	1,673	1,657	1,639	1,673	1,697	1,678	1,669	1,657	1,639
Civilian employed	117,039	117,359	118,277	117,132	117,863	118,035	118,334	118,116	118,350
Agriculture	3,284	3,102	3,452	3,137	3,134	3,079	3,200	3,133	3,305
Nonagricultural industries	113,755	114,257	114,825	113,995	114,728	114,957	115,133	114,983	115,045
Unemployed	6,156	6,457	6,363	6,419	6,535	6,594	6,495	6,770	6,653
Unemployment rate[6]	4.9	5.1	5.0	5.1	5.2	5.2	5.1	5.3	5.3
Not in labor force	62,985	63,853	63,188	62,630	62,896	62,782	62,700	62,783	62,624
Men, 16 years and over									
Noninstitutional population[2]	90,167	90,942	91,014	90,167	90,772	90,822	90,874	90,942	91,014
Labor force[3]	68,980	69,158	69,569	69,142	69,539	69,639	69,712	69,779	69,737
Participation rate[3]	76.5	76.0	76.4	76.7	76.6	76.7	76.7	76.7	76.6
Total employed[4]	65,731	65,492	66,096	65,713	65,943	66,106	66,208	66,043	66,058
Employment-population ratio[5]	72.9	72.0	72.6	72.9	72.6	72.8	72.9	72.6	72.6
Resident Armed Forces	1,511	1,499	1,472	1,511	1,523	1,506	1,497	1,499	1,472
Civilian employed	64,220	63,993	64,624	64,202	64,420	64,602	64,711	64,544	64,586
Unemployed	3,249	3,666	3,473	3,429	3,597	3,530	3,505	3,735	3,679
Unemployment rate[6]	4.7	5.3	5.0	5.0	5.2	5.1	5.0	5.4	5.3
Women, 16 years and over									
Noninstitutional population[2]	97,687	98,383	99,453	97,687	98,218	98,268	98,324	98,383	99,453
Labor force[3]	55,888	56,315	56,709	56,082	56,555	56,669	56,785	56,764	56,906
Participation rate[3]	57.2	57.2	57.6	57.4	57.6	57.7	57.8	57.7	57.8
Total employed[4]	52,981	53,524	53,820	53,092	53,617	53,605	53,795	53,729	53,931
Employment-population ratio[5]	54.2	54.4	54.7	54.3	54.6	54.5	54.7	54.6	54.6
Resident Armed Forces	162	158	167	162	174	172	172	158	167
Civilian employed	52,819	53,366	53,653	52,930	53,443	53,433	53,623	53,571	53,764
Unemployed	2,907	2,790	2,890	2,990	2,938	3,064	2,990	3,034	2,975
Unemployment rate[6]	5.2	5.0	5.1	5.3	5.2	5.4	5.3	5.3	5.2

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Employment as a percent of the labor force (including the resident Armed Forces).

[6] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
TOTAL									
Civilian noninstitutional population	186,181	187,669	187,828	186,181	187,293	187,412	187,529	187,669	187,828
Civilian labor force	123,196	123,816	124,640	123,551	124,397	124,630	124,829	124,898	125,004
Participation rate	66.2	66.0	66.4	66.4	66.4	66.5	66.6	66.5	66.6
Employed	117,039	117,359	118,277	117,132	117,883	118,035	118,334	118,116	118,350
Employment-population ratio[2]	62.9	62.5	63.0	62.9	62.9	63.0	63.1	62.9	63.0
Unemployed	6,156	6,457	6,363	6,419	6,535	6,594	6,496	6,770	6,653
Unemployment rate	5.0	5.2	5.1	5.2	5.3	5.3	5.2	5.4	5.3
Men, 20 years and over									
Civilian noninstitutional population	81,524	82,487	82,581	81,524	82,168	82,248	82,378	82,487	82,581
Civilian labor force	63,500	63,980	64,278	63,535	63,958	64,101	64,183	64,251	64,312
Participation rate	77.9	77.6	77.8	77.9	77.8	77.9	77.9	77.9	77.9
Employed	60,899	60,848	61,417	60,774	60,976	61,172	61,270	61,138	61,265
Employment-population ratio[2]	74.7	73.8	74.4	74.5	74.2	74.4	74.4	74.1	74.2
Agriculture	2,386	2,263	2,481	2,295	2,269	2,254	2,298	2,258	2,388
Nonagricultural industries	58,514	58,585	58,936	58,479	58,708	58,918	59,002	58,879	58,877
Unemployed	2,602	3,132	2,861	2,761	2,982	2,929	2,913	3,113	3,047
Unemployment rate	4.1	4.9	4.5	4.3	4.7	4.6	4.5	4.8	4.7
Women, 20 years and over									
Civilian noninstitutional population	90,432	91,330	91,414	90,432	91,091	91,157	91,237	91,330	91,414
Civilian labor force	52,078	52,786	53,103	52,120	52,686	52,814	52,800	52,954	53,146
Participation rate	57.6	57.8	58.1	57.6	57.8	57.9	57.9	58.0	58.1
Employed	49,682	50,439	50,742	49,649	50,255	50,287	50,344	50,427	50,709
Employment-population ratio[2]	54.9	55.2	55.5	54.9	55.2	55.2	55.2	55.2	55.5
Agriculture	668	831	713	633	594	582	648	689	680
Nonagricultural industries	49,013	49,606	50,029	49,016	49,661	49,704	49,696	49,758	50,029
Unemployed	2,396	2,347	2,362	2,471	2,431	2,527	2,456	2,526	2,438
Unemployment rate	4.6	4.4	4.4	4.7	4.6	4.8	4.7	4.8	4.6
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,224	13,852	13,832	14,224	14,034	14,008	13,914	13,852	13,832
Civilian labor force	7,617	7,051	7,258	7,896	7,752	7,715	7,846	7,681	7,545
Participation rate	53.6	50.9	52.5	55.5	55.2	55.1	56.4	55.4	54.6
Employed	6,459	6,072	6,118	6,709	6,631	6,577	6,720	6,551	6,376
Employment-population ratio[2]	45.4	43.8	44.2	47.2	47.3	47.0	48.3	47.3	46.1
Agriculture	232	206	258	209	270	243	285	206	237
Nonagricultural industries	6,227	5,865	5,860	6,500	6,361	6,334	6,435	6,345	6,139
Unemployed	1,158	978	1,141	1,187	1,121	1,138	1,126	1,130	1,169
Unemployment rate	15.2	13.9	15.7	15.0	14.5	14.8	14.4	14.7	15.5

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
WHITE									
Civilian noninstitutional population	159,200	160,170	160,271	159,200	159,938	160,007	160,076	160,170	160,271
Civilian labor force	105,898	106,460	107,075	106,152	106,884	107,080	107,061	107,133	107,353
Participation rate	66.5	66.5	66.8	66.7	66.8	66.9	66.9	66.9	67.0
Employed	101,412	101,564	102,350	101,432	102,074	102,117	102,206	102,027	102,362
Employment-population ratio[2]	63.7	63.4	63.9	63.7	63.8	63.8	63.8	63.7	63.9
Unemployed	4,486	4,895	4,724	4,720	4,811	4,962	4,856	5,106	4,991
Unemployment rate	4.2	4.6	4.4	4.4	4.5	4.6	4.5	4.8	4.6
Men, 20 years and over									
Civilian labor force	55,265	55,663	55,902	55,280	55,771	55,815	55,826	55,826	55,919
Participation rate	78.3	78.0	78.3	78.3	78.4	78.4	78.4	78.3	78.3
Employed	53,354	53,265	53,739	53,222	53,560	53,547	53,593	53,425	53,578
Employment-population ratio[2]	75.6	74.7	75.3	75.4	75.3	75.2	75.2	74.9	75.1
Unemployed	1,911	2,398	2,163	2,058	2,211	2,268	2,235	2,400	2,341
Unemployment rate	3.5	4.3	3.9	3.7	4.0	4.1	4.0	4.3	4.2
Women, 20 years and over									
Civilian labor force	44,039	44,700	44,894	44,057	44,475	44,615	44,523	44,740	44,925
Participation rate	57.1	57.5	57.7	57.2	57.4	57.5	57.4	57.6	57.8
Employed	42,324	42,981	43,208	42,268	42,716	42,782	42,765	42,895	43,165
Employment-population ratio[2]	54.9	55.3	55.6	54.8	55.1	55.2	55.1	55.2	55.5
Unemployed	1,716	1,719	1,686	1,789	1,757	1,833	1,758	1,844	1,760
Unemployment rate	3.9	3.8	3.8	4.1	4.0	4.1	3.9	4.1	3.9
Both sexes, 16 to 19 years									
Civilian labor force	6,593	6,097	6,278	6,815	6,639	6,650	6,710	6,568	6,509
Participation rate	57.0	54.6	56.3	58.9	58.7	59.0	59.8	58.8	58.4
Employed	5,734	5,318	5,403	5,942	5,796	5,788	5,847	5,707	5,619
Employment-population ratio[2]	49.6	47.6	48.5	51.3	51.3	51.4	52.1	51.1	50.4
Unemployed	859	779	875	873	843	862	863	861	890
Unemployment rate	13.0	12.8	13.9	12.8	12.7	13.0	12.9	13.1	13.7
Men	13.9	13.3	14.0	14.1	12.9	12.7	13.0	13.8	14.2
Women	12.0	12.2	13.8	11.4	12.4	13.2	12.7	12.4	13.1
BLACK									
Civilian noninstitutional population	20,986	21,228	21,261	20,986	21,163	21,188	21,211	21,228	21,261
Civilian labor force	13,372	13,335	13,499	13,454	13,510	13,437	13,581	13,570	13,587
Participation rate	63.7	62.8	63.5	64.1	63.8	63.4	64.0	63.9	63.9
Employed	11,862	11,973	12,093	11,962	11,978	12,030	12,148	12,161	12,179
Employment-population ratio[2]	56.6	56.4	56.9	57.0	56.6	56.8	57.3	57.3	57.3
Unemployed	1,491	1,362	1,406	1,492	1,532	1,407	1,433	1,409	1,408
Unemployment rate	11.1	10.2	10.4	11.1	11.3	10.5	10.6	10.4	10.4
Men, 20 years and over									
Civilian labor force	6,222	6,216	6,255	6,209	6,189	6,172	6,227	6,240	6,241
Participation rate	74.5	73.4	73.7	74.3	73.5	73.3	73.6	73.7	73.5
Employed	5,616	5,589	5,672	5,617	5,496	5,603	5,631	5,651	5,672
Employment-population ratio[2]	67.2	66.0	66.8	67.3	65.2	66.6	66.5	66.8	66.8
Unemployed	606	627	584	592	693	569	596	589	569
Unemployment rate	9.7	10.1	9.3	9.5	11.2	9.2	9.6	9.4	9.1
Women, 20 years and over									
Civilian labor force	6,293	6,358	6,459	6,341	6,393	6,423	6,456	6,451	6,516
Participation rate	60.2	59.9	60.8	60.6	60.5	60.7	60.9	60.8	61.3
Employed	5,694	5,799	5,874	5,734	5,802	5,821	5,872	5,858	5,921
Employment-population ratio[2]	54.4	54.7	55.3	54.8	54.9	55.0	55.4	55.2	55.7
Unemployed	599	558	585	607	591	602	584	594	595
Unemployment rate	9.5	8.8	9.1	9.6	9.2	9.4	9.0	9.2	9.1
Both sexes, 16 to 19 years									
Civilian labor force	857	762	784	904	928	842	898	879	830
Participation rate	39.4	35.4	36.5	41.6	42.8	38.5	41.7	40.8	38.6
Employed	572	585	547	611	680	606	645	662	588
Employment-population ratio[2]	26.3	27.1	25.5	28.1	31.3	27.7	30.0	30.3	27.3
Unemployed	285	177	237	293	248	236	253	227	244
Unemployment rate	33.3	23.3	30.2	32.4	26.7	28.0	28.2	25.8	29.4
Men	37.0	24.7	32.6	35.4	29.2	28.5	30.0	31.2	31.1
Women	29.5	21.7	27.4	29.6	24.0	27.5	26.2	24.0	27.6

See footnotes at end of table.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,731	14,198	14,238	13,731	14,090	14,119	14,159	14,198	14,238
Civilian labor force	9,334	9,535	9,648	9,359	9,440	9,400	9,566	9,618	9,669
Participation rate	68.0	67.2	67.7	68.2	67.0	66.6	67.6	67.7	67.9
Employed	8,608	8,770	8,918	8,619	8,789	8,686	8,831	8,850	8,927
Employment-population ratio[2]	62.7	61.8	62.6	62.8	62.3	61.4	62.4	62.3	62.7
Unemployed	725	765	728	740	671	734	734	768	742
Unemployment rate	7.8	8.0	7.5	7.9	7.1	7.8	7.7	8.0	7.7

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	117,039	117,359	118,277	117,132	117,883	118,035	118,334	118,118	118,350
Married men, spouse present	40,984	40,600	40,922	40,932	40,962	41,347	40,988	40,730	40,881
Married women, spouse present	29,798	30,010	30,256	29,808	29,997	29,704	29,818	29,742	30,046
Women who maintain families	6,356	6,306	6,394	6,354	6,215	6,378	6,291	6,325	6,400
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,718	1,593	1,795	1,647	1,634	1,578	1,620	1,621	1,728
Self-employed workers	1,411	1,400	1,534	1,377	1,354	1,375	1,457	1,429	1,502
Unpaid family workers	155	109	123	127	107	118	115	112	101
Nonagricultural industries:									
Wage and salary workers	104,878	105,258	105,779	105,232	105,747	106,117	106,029	105,938	106,176
Government	17,368	17,941	18,187	17,305	17,626	17,607	17,724	17,816	18,113
Private industries	87,510	87,317	87,612	87,927	88,121	88,510	88,306	88,122	88,063
Private households	1,158	930	972	1,123	1,035	1,021	1,003	957	941
Other industries	86,352	86,387	86,640	86,804	87,086	87,489	87,302	87,165	87,122
Self-employed workers	8,559	8,725	8,774	8,573	8,733	8,628	8,852	8,716	8,783
Unpaid family workers	318	274	272	299	258	313	261	258	254
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	4,624	4,574	4,585	4,883	4,983	4,887	5,004	4,871	4,631
Slack work	2,115	2,318	2,224	2,314	2,402	2,307	2,476	2,407	2,439
Could only find part-time work	2,200	1,986	1,958	2,307	2,255	2,211	2,127	2,138	2,052
Voluntary part time	16,082	15,907	16,325	15,350	14,931	15,381	15,464	15,193	15,592
Nonagricultural industries:									
Part time for economic reasons	4,411	4,385	4,419	4,643	4,729	4,703	4,747	4,630	4,666
Slack work	1,970	2,176	2,132	2,137	2,240	2,183	2,293	2,219	2,317
Could only find part-time work	2,142	1,949	1,914	2,246	2,172	2,173	2,050	2,096	2,004
Voluntary part time	15,650	15,441	15,742	14,977	14,515	14,924	14,975	14,804	15,064

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

HOUSEHOLD DATA

Table A-6. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989				1990	1990		
	I	II	III	IV	I	Mar.	Apr.	May
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
U-2 Job losers as a percent of the civilian labor force	2.4	2.3	2.4	2.5	2.5	2.4	2.5	2.5
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.0	4.0	4.1	4.2	4.1	4.2	4.1
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	4.9	4.9	5.0	5.0	4.9	4.9	5.1	4.9
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.1	5.2	5.2	5.3	5.2	5.1	5.3	5.3
U-5b Total unemployed as a percent of the civilian labor force	5.2	5.3	5.3	5.3	5.2	5.2	5.4	5.3
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.2	7.3	7.2	7.2	7.2	7.2	7.4	7.2
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	7.9	8.0	7.9	7.9	7.8	N.A.	N.A.	N.A.

N.A. = not available.

Table A-8. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	May 1989	Apr 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
CHARACTERISTIC									
Total, 16 years and over	6,419	6,770	6,653	5.2	5.3	5.3	5.2	5.4	5.3
Men, 16 years and over	3,429	3,735	3,679	5.1	5.3	5.2	5.1	5.5	5.4
Men, 20 years and over	2,761	3,113	3,047	4.3	4.7	4.6	4.5	4.8	4.7
Women, 16 years and over	2,990	3,034	2,975	5.3	5.2	5.4	5.3	5.4	5.2
Women, 20 years and over	2,471	2,526	2,438	4.7	4.6	4.8	4.7	4.8	4.6
Both sexes, 16 to 19 years	1,167	1,130	1,189	15.0	14.5	14.8	14.4	14.7	15.5
Married men, spouse present	1,237	1,390	1,404	2.9	3.4	3.0	3.2	3.3	3.3
Married women, spouse present	1,173	1,075	1,095	3.8	3.7	3.8	3.6	3.5	3.5
Women who maintain families	567	517	511	8.2	7.5	7.5	8.4	7.5	7.4
Full-time workers	5,129	5,509	5,240	4.9	5.0	4.9	4.9	5.1	4.9
Part-time workers	1,250	1,266	1,373	6.9	7.0	7.4	7.2	7.1	7.4
Labor force time lost[2]	—	—	—	6.0	6.0	5.9	5.9	6.2	6.0
INDUSTRY									
Nonagricultural private wage and salary workers	4,858	5,300	5,115	5.2	5.5	5.5	5.5	5.7	5.5
Goods-producing industries	1,731	2,008	1,919	5.9	6.7	6.6	6.6	5.9	6.7
Mining	37	35	25	4.6	6.8	4.6	5.9	4.6	3.3
Construction	804	891	732	9.5	9.3	8.9	10.0	10.6	11.5
Manufacturing	1,090	1,281	1,162	4.9	5.9	5.9	5.5	5.9	5.4
Durable goods	591	729	666	4.6	5.8	5.5	5.3	5.7	5.5
Nondurable goods	499	552	464	5.5	5.9	6.4	5.9	6.3	5.2
Service-producing industries	3,127	3,293	3,196	4.9	5.0	5.0	5.0	5.1	5.0
Transportation and public utilities	256	282	208	4.0	4.7	4.0	3.4	4.0	3.2
Wholesale and retail trade	1,316	1,484	1,478	5.6	6.2	6.0	6.2	6.2	6.1
Finance and service industries	1,553	1,527	1,511	4.0	4.3	4.4	4.5	4.1	4.0
Government workers	510	460	457	2.9	2.4	2.5	2.9	3.1	2.9
Agricultural wage and salary workers	180	200	149	9.9	9.2	9.3	10.1	11.0	7.7

[1] Unemployment as a percent of the civilian labor force

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor [illegible]

HOUSEHOLD DATA

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
DURATION									
Less than 5 weeks	3,008	2,858	2,956	3,070	3,119	3,159	3,194	3,204	3,026
5 to 14 weeks	1,708	1,953	1,921	1,993	2,012	2,079	2,044	2,175	2,236
15 weeks and over	1,440	1,646	1,485	1,331	1,430	1,369	1,333	1,386	1,374
15 to 26 weeks	792	915	849	711	777	731	702	697	764
27 weeks and over	648	731	636	620	653	639	631	688	610
Average (mean) duration, in weeks	12.4	13.0	12.1	11.9	12.1	11.7	12.0	12.1	11.6
Median duration, in weeks	5.3	5.8	5.3[1]	5.3	5.1	5.4	5.1	5.0	5.4
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	48.9	44.3	48.5	48.0	47.5	47.8	48.6	47.4	45.6
5 to 14 weeks	27.7	30.2	30.2	31.2	30.7	31.5	31.1	32.2	33.7
15 weeks and over	23.4	25.5	23.3	20.8	21.8	20.7	20.3	20.5	20.7
15 to 26 weeks	12.9	14.2	13.3	11.1	11.8	11.1	10.7	10.3	11.5
27 weeks and over	10.5	11.3	10.0	9.7	9.9	9.7	9.6	10.2	9.2

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
NUMBER OF UNEMPLOYED									
Job losers	2,601	3,213	2,936	2,798	3,183	3,103	3,038	3,147	3,171
On layoff	681	944	822	805	1,033	984	941	999	979
Other job losers	1,920	2,269	2,114	1,993	2,150	2,139	2,097	2,148	2,192
Job leavers	985	1,065	887	1,103	1,016	1,008	1,014	1,179	1,014
Reentrants	1,880	1,625	1,845	1,853	1,730	1,805	1,859	1,780	1,820
New entrants	710	554	695	696	640	680	644	617	683
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	42.3	49.8	46.1	43.4	48.5	47.1	46.3	46.8	47.4
On layoff	11.1	14.6	12.9	12.5	15.7	14.6	14.4	14.9	14.6
Other job losers	31.2	35.1	33.2	30.9	32.7	32.4	32.0	31.9	32.8
Job leavers	15.7	16.5	13.9	17.1	15.5	15.3	15.5	17.5	15.2
Reentrants	30.5	25.2	29.0	28.7	26.3	27.4	28.4	26.5	27.2
New entrants	11.5	8.6	10.9	10.8	9.7	10.3	9.8	9.2	10.2
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.2	2.6	2.4	2.3	2.6	2.5	2.4	2.5	2.5
Job leavers	.8	.9	.7	.9	.8	.8	.8	.9	.8
Reentrants	1.5	1.3	1.5	1.5	1.4	1.4	1.5	1.4	1.5
New entrants	.6	.4	.6	.6	.5	.5	.5	.5	.5

HOUSEHOLD DATA

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
Total, 16 years and over	6,419	6,770	6,653	5.2	5.3	5.3	5.2	5.4	5.3
16 to 24 years	2,312	2,425	2,349	10.5	10.8	10.7	10.5	11.2	11.0
16 to 19 years	1,187	1,130	1,169	15.0	14.5	14.8	14.4	14.7	15.5
16 to 17 years	516	519	597	18.8	14.8	16.8	16.9	17.4	20.0
18 to 19 years	684	609	587	14.3	14.2	13.0	12.9	13.0	12.8
20 to 24 years	1,125	1,295	1,180	7.9	8.5	8.4	8.3	9.3	8.5
25 years and over	4,080	4,347	4,245	4.0	4.2	4.2	4.1	4.2	4.1
25 to 54 years	3,637	3,864	3,832	4.2	4.3	4.3	4.3	4.4	4.3
55 years and over	453	505	464	2.9	3.4	3.4	3.3	3.3	3.0
Men, 16 years and over	3,429	3,735	3,679	5.1	5.3	5.2	5.1	5.5	5.4
16 to 24 years	1,260	1,343	1,261	10.9	11.2	10.9	10.9	11.8	11.2
16 to 19 years	666	622	632	16.3	15.1	14.9	14.7	15.4	16.0
16 to 17 years	302	281	318	18.7	14.2	16.5	16.9	18.1	20.6
18 to 19 years	371	341	320	15.1	15.6	13.7	13.6	13.8	13.4
20 to 24 years	592	721	629	8.0	8.9	8.8	8.9	9.8	8.6
25 years and over	2,116	2,387	2,358	3.8	4.2	4.1	4.0	4.2	4.1
25 to 54 years	1,863	2,099	2,089	3.9	4.3	4.2	4.2	4.4	4.3
55 years and over	265	310	296	3.0	3.8	3.5	3.4	3.5	3.4
Women, 16 years and over	2,990	3,034	2,975	5.3	5.2	5.4	5.3	5.4	5.2
16 to 24 years	1,052	1,082	1,087	10.0	10.1	10.4	10.0	10.5	10.7
16 to 19 years	519	508	537	13.7	13.7	14.6	14.0	13.9	14.9
16 to 17 years	214	238	279	14.3	15.5	17.3	16.9	16.7	19.4
18 to 19 years	313	268	257	13.4	12.6	12.3	12.0	12.1	12.2
20 to 24 years	533	574	550	7.9	8.0	8.1	7.7	8.7	8.4
25 years and over	1,942	1,961	1,887	4.3	4.1	4.3	4.2	4.2	4.1
25 to 54 years	1,774	1,766	1,742	4.6	4.3	4.5	4.4	4.4	4.4
55 years and over	188	195	169	2.9	3.3	3.3	3.3	2.9	2.5

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
Civilian noninstitutional population	26,981	27,499	27,556	26,981	27,355	27,405	27,453	27,499	27,556
Civilian labor force	17,298	17,356	17,568	17,394	17,802	17,546	17,727	17,687	17,660
Participation rate	64.1	63.1	63.7	64.5	64.3	64.0	64.6	64.3	64.1
Employed	15,627	15,795	15,928	15,719	15,827	15,827	16,061	16,075	16,021
Employment-population ratio[2]	57.9	57.4	57.8	58.3	57.9	58.1	58.5	58.5	58.1
Unemployed	1,671	1,562	1,638	1,675	1,775	1,618	1,667	1,613	1,640
Unemployment rate	9.7	9.0	9.3	9.6	10.1	9.2	9.4	9.1	9.3
Not in labor force	9,683	10,142	9,991	9,587	9,753	9,860	9,726	9,812	9,896

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	May 1989	May 1990	May 1989	May 1990	May 1989	May 1990
Total, 16 years and over[1]	117,039	118,277	6,156	6,363	5.0	5.1
Managerial and professional specialty	30,627	30,542	588	589	1.9	1.9
Executive, administrative, and managerial	15,041	14,733	323	294	2.1	2.0
Professional specialty	15,586	15,809	265	295	1.7	1.8
Technical, sales, and administrative support	35,786	37,141	1,470	1,444	3.9	3.7
Technicians and related support	3,613	3,810	98	113	2.6	2.8
Sales occupations	14,005	14,355	594	629	4.1	4.2
Administrative support, including clerical	18,168	18,975	779	702	4.1	3.6
Service occupations	15,434	15,811	1,089	1,125	6.6	6.7
Private household	878	743	94	53	9.7	6.7
Protective service	1,916	1,947	65	90	3.3	4.4
Service, except private household and protective	12,640	12,921	930	982	6.9	7.1
Precision production, craft, and repair	13,551	13,838	721	735	5.1	5.1
Mechanics and repairers	4,650	4,466	154	142	3.2	3.1
Construction trades	4,949	5,258	385	433	7.2	7.6
Other precision production, craft, and repair	3,953	3,915	182	160	4.4	3.9
Operators, fabricators, and laborers	18,037	17,865	1,342	1,530	6.9	8.0
Machine operators, assemblers, and inspectors	8,312	8,004	641	592	7.2	6.9
Transportation and material moving occupations	4,825	4,846	208	269	4.0	5.3
Handlers, equipment cleaners, helpers, and laborers	4,800	4,817	493	669	9.3	12.2
Construction laborers	713	822	126	175	15.0	17.6
Other handlers, equipment cleaners, helpers, and laborers	4,087	3,994	366	493	8.3	11.0
Farming, forestry, and fishing	3,604	3,679	205	168	5.4	4.4

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	May 1989	May 1990	May 1989	May 1990	May 1989	May 1990	May 1989	May 1990	May 1989	May 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,422	7,623	6,772	6,930	6,583	6,696	190	234	2.8	3.4
35 to 49 years	6,467	6,523	6,143	6,164	5,968	5,947	176	217	2.9	3.5
35 to 39 years	1,789	1,446	1,685	1,338	1,621	1,290	64	49	3.8	3.6
40 to 44 years	3,276	3,326	3,133	3,199	3,055	3,091	78	109	2.5	3.4
45 to 49 years	1,402	1,751	1,324	1,626	1,291	1,567	33	59	2.5	3.6
50 years and over	955	1,100	629	767	615	749	14	17	2.2	2.3
NONVETERANS										
Total, 35 to 49 years	16,064	17,137	14,992	16,015	14,497	15,438	495	577	3.3	3.6
35 to 39 years	7,358	7,882	6,973	7,497	6,721	7,242	252	255	3.6	3.4
40 to 44 years	4,636	5,039	4,321	4,688	4,186	4,524	135	163	3.1	3.5
45 to 49 years	4,070	4,215	3,698	3,830	3,590	3,671	108	159	2.9	4.1

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces. published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population. Data for 30-to 34-year-old veterans are no longer shown in this table because the group is rapidly disappearing (into the 35-39 age category) and the numbers remaining for some labor force categories are not large enough to warrant their continued publication.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	May 1989	Apr. 1990	May 1990	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May 1990
California									
Civilian noninstitutional population	21,398	21,834	21,877	21,398	21,718	21,758	21,794	21,834	21,877
Civilian labor force	14,447	14,600	14,750	14,503	14,491	14,498	14,613	14,677	14,801
Employed	13,706	13,831	13,964	13,741	13,734	13,784	13,847	13,861	13,998
Unemployed	739	769	786	762	757	712	766	796	803
Unemployment rate	5.1	5.3	5.3	5.3	5.2	4.9	5.2	5.4	5.4
Florida									
Civilian noninstitutional population	9,862	10,071	10,091	9,862	10,015	10,034	10,052	10,071	10,091
Civilian labor force	6,211	6,297	6,302	6,192	6,289	6,369	6,351	6,336	6,282
Employed	5,830	5,950	5,960	5,800	5,940	5,989	6,021	5,972	5,931
Unemployed	381	347	342	392	349	380	330	364	351
Unemployment rate	6.1	5.5	5.4	6.3	5.5	6.0	5.2	5.7	5.6
Illinois									
Civilian noninstitutional population	8,827	8,863	8,887	8,827	8,854	8,857	8,859	8,862	8,867
Civilian labor force	5,971	6,039	5,965	5,992	6,064	6,029	6,001	6,091	5,987
Employed	5,615	5,662	5,640	5,645	5,673	5,674	5,671	5,722	5,670
Unemployed	355	376	324	347	391	355	330	369	317
Unemployment rate	6.0	6.2	5.4	5.8	6.4	5.9	5.5	6.1	5.3
Massachusetts									
Civilian noninstitutional population	4,618	4,619	4,619	4,618	4,619	4,619	4,618	4,619	4,619
Civilian labor force	3,186	3,180	3,190	3,201	3,152	3,203	3,178	3,181	3,203
Employed	3,081	2,987	3,027	3,084	3,011	3,034	3,006	2,988	3,028
Unemployed	106	173	163	117	141	169	172	173	175
Unemployment rate	3.3	5.5	5.1	3.7	4.5	5.3	5.4	5.5	5.5
Michigan									
Civilian noninstitutional population	6,983	6,995	6,997	6,983	6,993	6,993	6,994	6,995	6,997
Civilian labor force	4,505	4,447	4,550	4,540	4,645	4,605	4,553	4,511	4,591
Employed	4,217	4,136	4,228	4,224	4,254	4,250	4,226	4,180	4,238
Unemployed	288	311	322	316	391	355	327	331	353
Unemployment rate	6.4	7.0	7.1	7.0	8.4	7.7	7.2	7.3	7.7
New Jersey									
Civilian noninstitutional population	6,033	6,028	6,028	6,033	6,030	6,029	6,028	6,028	6,028
Civilian labor force	3,955	3,976	4,019	3,945	3,994	4,029	4,034	4,002	4,012
Employed	3,832	3,800	3,834	3,816	3,810	3,848	3,844	3,805	3,820
Unemployed	123	177	185	129	184	181	190	197	192
Unemployment rate	3.1	4.4	4.6	3.3	4.6	4.5	4.7	4.9	4.8
New York									
Civilian noninstitutional population	13,805	13,799	13,800	13,805	13,803	13,801	13,799	13,799	13,800
Civilian labor force	8,589	8,581	8,635	8,728	8,709	8,730	8,660	8,709	8,775
Employed	8,143	8,170	8,195	8,278	8,300	8,294	8,223	8,286	8,328
Unemployed	445	411	441	450	409	436	437	423	447
Unemployment rate	5.2	4.8	5.1	5.2	4.7	5.0	5.0	4.9	5.1
North Carolina									
Civilian noninstitutional population	4,930	4,985	4,991	4,930	4,971	4,975	4,980	4,985	4,991
Civilian labor force	3,399	3,367	3,439	3,413	3,361	3,396	3,399	3,410	3,451
Employed	3,280	3,247	3,308	3,286	3,237	3,274	3,283	3,281	3,312
Unemployed	120	120	132	127	124	121	116	129	139
Unemployment rate	3.5	3.6	3.8	3.7	3.7	3.6	3.4	3.8	4.0
Ohio									
Civilian noninstitutional population	8,258	8,278	8,281	8,258	8,274	8,275	8,276	8,278	8,281
Civilian labor force	5,393	5,373	5,409	5,409	5,426	5,372	5,402	5,417	5,428
Employed	5,116	5,071	5,104	5,116	5,080	5,061	5,107	5,096	5,107
Unemployed	278	302	305	293	346	311	295	319	321
Unemployment rate	5.1	5.6	5.6	5.4	6.4	5.8	5.5	5.9	5.9

See footnotes at end of table

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	May. 1989	Apr. 1990	May. 1990	May. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990	May. 1990
Pennsylvania									
Civilian noninstitutional population[2]	9,364	9,382	9,385	9,364	9,378	9,379	9,380	9,382	9,385
Civilian labor force	5,825	5,878	5,889	5,877	5,875	5,966	6,004	5,945	5,941
Employed	5,567	5,562	5,604	5,610	5,568	5,623	5,694	5,604	5,648
Unemployed	258	315	285	267	307	343	310	341	293
Unemployment rate	4.4	5.4	4.8	4.5	5.2	5.7	5.2	5.7	4.9
Texas									
Civilian noninstitutional population[2]	12,196	12,337	12,351	12,196	12,300	12,312	12,323	12,337	12,351
Civilian labor force	8,383	8,386	8,410	8,398	8,440	8,494	8,447	8,495	8,425
Employed	7,887	7,887	7,887	7,886	7,999	7,949	7,977	7,955	7,880
Unemployed	496	499	523	513	441	545	470	540	545
Unemployment rate	5.9	6.0	6.2	6.1	5.2	6.4	5.6	6.4	6.5

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1989	Mar. 1990	Apr. 1990p/	May 1990p/	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990p/	May 1990p/
Total	108,745	109,581	110,263	111,031	108,310	109,931	110,304	110,427	110,484	110,568
Total private	90,715	91,088	91,699	92,306	90,625	91,975	92,302	92,313	92,187	92,197
Goods-producing industries	25,663	25,057	25,244	25,439	25,672	25,518	25,686	25,606	25,491	25,439
Mining	719	737	747	755	722	745	749	751	755	757
Oil and gas extraction	395.9	415.0	418.0	420.6	401	417	422	421	424	425
Construction	5,325	5,003	5,177	5,355	5,283	5,418	5,485	5,432	5,332	5,313
General building contractors	1,385.9	1,320.8	1,336.2	1,380.1	1,388	1,425	1,436	1,416	1,385	1,384
Manufacturing	19,619	19,317	19,320	19,329	19,667	19,355	19,452	19,423	19,404	19,369
Production workers	13,590	13,107	13,124	13,137	13,426	13,128	13,217	13,191	13,192	13,169
Durable goods	11,587	11,342	11,336	11,345	11,596	11,287	11,398	11,385	11,352	11,339
Production workers	7,738	7,528	7,535	7,548	7,735	7,456	7,564	7,559	7,546	7,557
Lumber and wood products	769.1	745.6	749.5	760.3	771	770	765	766	763	762
Furniture and fixtures	531.3	522.9	520.6	519.1	534	522	522	523	520	521
Stone, clay, and glass products	609.2	584.8	591.5	598.1	604	601	602	599	593	593
Primary metal industries	786.9	766.8	767.0	766.2	787	764	767	765	766	766
Blast furnaces and basic steel products	275.5	267.1	267.7	266.6	276	270	269	267	269	267
Fabricated metal products	1,451.0	1,416.1	1,420.4	1,419.6	1,452	1,407	1,419	1,420	1,425	1,421
Machinery, except electrical	2,155.9	2,137.7	2,129.3	2,126.7	2,150	2,143	2,140	2,133	2,125	2,122
Electrical and electronic equipment	2,039.6	1,981.9	1,973.5	1,966.6	2,050	1,989	1,991	1,990	1,981	1,976
Transportation equipment	2,078.0	2,021.9	2,022.8	2,025.9	2,076	1,920	2,021	2,022	2,015	2,012
Motor vehicles and equipment	879.4	824.1	827.8	827.0	876	726	825	824	820	816
Instruments and related products	776.6	773.9	772.2	772.7	778	774	776	775	774	774
Miscellaneous manufacturing	391.4	390.4	389.4	391.7	392	395	395	392	390	392
Nondurable goods	8,032	7,975	7,984	7,984	8,073	8,068	8,054	8,038	8,052	8,030
Production workers	5,652	5,579	5,589	5,589	5,691	5,672	5,653	5,632	5,646	5,632
Food and kindred products	1,616.4	1,612.5	1,616.8	1,624.5	1,656	1,676	1,674	1,669	1,674	1,668
Tobacco manufactures	49.2	49.0	46.1	46.2	53	51	51	50	49	50
Textile mill products	728.5	709.9	710.1	705.5	728	718	714	711	712	706
Apparel and other textile products	1,099.5	1,057.6	1,052.8	1,056.2	1,095	1,075	1,063	1,054	1,057	1,051
Paper and allied products	696.6	695.9	694.8	694.6	697	697	699	697	698	697
Printing and publishing	1,601.8	1,627.5	1,628.5	1,625.7	1,603	1,624	1,625	1,626	1,627	1,627
Chemicals and allied products	1,092.2	1,102.8	1,102.6	1,104.2	1,094	1,104	1,106	1,106	1,106	1,105
Petroleum and coal products	162.9	161.8	163.9	166.3	162	163	165	165	165	165
Rubber and misc. plastics products	844.3	825.7	829.6	828.4	843	826	821	824	829	827
Leather and leather products	142.2	136.7	134.2	134.2	142	136	136	136	135	134
Service-producing industries	83,082	84,524	85,019	85,592	82,638	84,413	84,618	84,821	84,913	85,129
Transportation and public utilities	5,699	5,816	5,840	5,881	5,700	5,850	5,865	5,875	5,871	5,879
Transportation	3,487	3,612	3,632	3,669	3,684	3,635	3,649	3,660	3,656	3,665
Communication and public utilities	2,212	2,204	2,208	2,212	2,216	2,215	2,216	2,215	2,217	2,214
Wholesale trade	6,217	6,301	6,320	6,351	6,222	6,332	6,332	6,342	6,338	6,354
Durable goods	3,685	3,747	3,748	3,759	3,685	3,754	3,759	3,762	3,756	3,759
Nondurable goods	2,532	2,554	2,572	2,592	2,537	2,578	2,573	2,580	2,582	2,595
Retail trade	19,528	19,570	19,589	19,803	19,528	19,822	19,794	19,785	19,807	19,803
General merchandise stores	2,416.3	2,363.6	2,363.3	2,364.6	2,491	2,491	2,460	2,452	2,466	2,435
Food stores	3,228.5	3,325.0	3,336.8	3,359.2	3,245	3,361	3,361	3,363	3,377	3,379
Automotive dealers and service stations	2,162.9	2,152.0	2,162.8	2,174.6	2,159	2,170	2,172	2,174	2,171	2,170
Eating and drinking places	6,462.2	6,311.5	6,474.8	6,619.9	6,348	6,459	6,467	6,480	6,494	6,503
Finance, insurance, and real estate	6,790	6,872	6,889	6,923	6,790	6,896	6,916	6,922	6,919	6,924
Finance	3,513	3,556	3,552	3,556	3,520	3,553	3,566	3,561	3,565	3,563
Insurance	2,123	2,160	2,159	2,165	2,123	2,152	2,155	2,162	2,161	2,165
Real estate	1,554	1,558	1,578	1,602	1,547	1,591	1,595	1,599	1,593	1,596
Services	26,818	27,672	27,817	27,909	26,711	27,537	27,709	27,785	27,761	27,798
Business services	5,758.5	5,837.1	5,841.6	5,886.5	5,776	5,885	5,899	5,902	5,883	5,898
Health services	7,555.0	8,025.2	8,058.9	8,105.7	7,570	7,934	7,981	8,033	8,075	8,122
Government	18,030	18,495	18,564	18,725	17,687	17,956	18,002	18,114	18,217	18,371
Federal	3,005	3,082	3,149	3,297	2,999	2,998	3,006	3,088	3,155	3,289
State	4,181	4,319	4,525	4,280	4,119	4,178	4,197	4,205	4,211	4,217
Local	10,844	11,092	11,090	11,148	10,569	10,780	10,799	10,821	10,851	10,865

p = preliminary.

Note on temporary census workers

The number of temporary workers associated with the 1990 census has an impact on the employment levels for the Federal government, as well as for higher aggregates. The estimate of these workers was 22,000 in January, 27,000 in February, 117,000 in March, and 178,000 in April. For May, the estimated number (preliminary) was 325,000, which may be subject to significant revision.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1989	Mar. 1990	Apr. 1990p/	May 1990p/	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990p/	May 1990p/
Total private	34.5	34.4	34.5	34.3	34.6	34.5	34.6	34.6	34.6	34.6
Mining	42.0	41.0	41.5	41.4	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.7	37.9	37.5	38.2	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.9	40.7	39.8	40.9	41.0	40.7	40.7	40.8	40.7	41.1
Overtime hours	3.6	3.6	2.9	3.8	3.8	3.7	3.6	3.6	3.5	4.0
Durable goods	41.3	41.4	40.3	41.6	41.5	41.3	41.3	41.4	41.2	41.7
Overtime hours	3.8	3.7	2.8	4.0	3.9	3.7	3.6	3.7	3.5	4.2
Lumber and wood products	40.1	40.1	40.1	40.6	39.7	40.5	39.8	40.3	40.2	40.4
Furniture and fixtures	39.0	39.0	38.1	38.9	39.4	39.8	39.5	39.2	39.0	39.4
Stone, clay, and glass products	42.6	41.6	41.8	42.6	41.9	42.2	42.1	41.9	41.8	42.1
Primary metal industries	43.1	42.7	41.7	43.0	43.2	42.5	42.3	42.6	41.8	43.1
Blast furnaces and basic steel products	43.6	42.9	43.0	44.0	43.6	43.2	42.8	42.9	43.0	44.0
Fabricated metal products	41.5	41.6	40.1	41.9	41.7	41.1	41.3	41.7	41.3	42.0
Machinery, except electrical	42.3	42.1	40.7	42.2	42.5	42.1	42.2	42.0	41.8	42.4
Electrical and electronic equipment	40.6	40.9	39.7	40.5	40.7	40.8	41.1	41.1	40.9	40.8
Transportation equipment	42.7	42.3	40.8	43.0	42.5	41.4	41.5	42.0	42.2	42.8
Motor vehicles and equipment	43.3	42.7	41.0	44.1	42.8	40.8	41.2	42.2	41.6	43.8
Instruments and related products	40.8	41.2	40.5	41.5	41.1	41.0	41.0	41.1	41.4	41.8
Miscellaneous manufacturing	39.4	39.4	38.1	39.2	39.6	39.4	39.5	39.4	39.1	39.3
Nondurable goods	40.0	39.8	39.2	40.0	40.2	40.0	39.9	40.0	39.9	40.2
Overtime hours	3.5	3.4	3.0	3.5	3.7	3.6	3.5	3.5	3.5	3.7
Food and kindred products	40.4	40.0	39.7	40.8	40.5	40.5	40.5	40.4	40.6	41.0
Tobacco manufactures	39.5	38.8	38.0	39.0	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.2	39.9	39.1	40.6	41.4	40.5	40.2	40.1	40.2	40.8
Apparel and other textile products	37.0	36.2	35.2	36.5	37.1	36.7	36.6	36.2	36.4	36.6
Paper and allied products	43.1	42.9	42.4	43.5	43.3	43.3	43.0	43.2	43.2	43.5
Printing and publishing	37.4	36.0	37.5	37.5	37.7	37.8	37.8	37.9	37.7	37.8
Chemicals and allied products	42.1	42.5	42.4	42.2	42.1	42.7	42.5	42.5	42.6	42.4
Petroleum and coal products	43.9	44.2	44.2	43.5	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.5	41.5	40.1	41.5	41.5	40.9	41.1	41.3	41.0	41.6
Leather and leather products	37.6	37.5	36.3	37.4	37.4	37.4	38.0	37.8	37.3	37.2
Transportation and public utilities	39.3	39.1	39.1	39.3	39.5	39.1	39.3	39.3	39.5	39.4
Wholesale trade	37.9	37.9	38.1	38.0	37.9	38.0	38.1	38.1	38.2	38.1
Retail trade	28.8	28.5	29.0	28.8	28.9	28.8	28.9	28.9	29.0	28.9
Finance, insurance, and real estate	35.6	35.7	36.2	35.6	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.5	32.7	32.4	32.5	32.5	32.6	32.7	32.7	32.6

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	May 1989	Mar. 1990	Apr. 1990p/	May 1990p/	May 1989	Mar. 1990	Apr. 1990p/	May 1990p/
Total private	$9.59	$9.93	$9.96	$9.98	$336.86	$341.59	$343.62	$344.31
Seasonally adjusted	9.60	9.92	9.95	9.99	332.16	343.23	344.27	345.63
Mining	13.13	13.42	13.52	13.49	551.46	577.06	585.42	583.47
Construction	13.28	13.47	13.38	13.51	500.66	510.51	499.07	516.08
Manufacturing	10.42	10.73	10.74	10.82	426.18	436.71	427.45	442.54
Durable goods	10.94	11.24	11.22	11.33	454.01	465.34	452.17	471.33
Lumber and wood products	8.79	9.07	9.11	9.17	352.48	363.71	365.31	372.30
Furniture and fixtures	8.16	8.41	8.42	8.47	318.24	327.99	328.80	329.48
Stone, clay, and glass products	10.69	10.95	11.10	11.07	453.26	455.52	463.98	469.37
Primary metal industries	12.25	12.65	12.83	12.77	527.98	540.16	535.01	549.11
Blast furnaces and basic steel products	14.06	14.54	14.88	14.71	615.02	625.77	639.84	647.24
Fabricated metal products	10.49	10.72	10.62	10.79	439.34	445.95	425.86	452.10
Machinery, except electrical	11.29	11.57	11.52	11.62	477.57	487.18	468.86	498.36
Electrical and electronic equipment	10.33	10.58	10.58	10.67	417.33	432.72	420.03	432.14
Transportation equipment	13.58	14.05	13.92	14.15	579.87	594.32	567.94	608.45
Motor vehicles and equipment	14.17	14.61	14.44	14.75	613.56	623.85	592.04	650.48
Instruments and related products	10.17	10.57	10.57	10.62	414.94	435.48	428.09	440.73
Miscellaneous manufacturing	8.24	8.68	8.60	8.55	324.66	338.84	327.66	335.16
Nondurable goods	9.68	10.02	10.07	10.10	387.20	398.84	396.74	404.00
Food and kindred products	9.54	9.56	9.56	9.60	377.54	382.40	379.53	391.68
Tobacco manufactures	16.13	16.46	17.11	17.12	637.14	658.65	650.18	667.68
Textile mill products	7.62	7.95	7.92	8.00	313.94	317.21	309.67	324.80
Apparel and other textile products	6.32	6.53	6.57	6.59	233.84	236.39	231.26	240.54
Paper and allied products	11.89	12.13	12.26	12.51	512.46	520.58	519.82	533.02
Printing and publishing	10.76	11.13	11.08	11.12	402.42	422.94	413.28	417.00
Chemicals and allied products	12.98	13.30	13.45	13.45	546.46	565.25	572.97	567.59
Petroleum and coal products	15.34	16.14	16.35	16.08	673.45	713.39	722.67	696.26
Rubber and misc. plastics products	9.60	9.62	9.60	9.77	390.10	397.31	384.96	405.46
Leather and leather products	6.58	6.84	6.93	6.91	247.41	255.13	251.56	258.43
Transportation and public utilities	12.69	12.82	12.93	12.88	498.86	501.26	505.56	506.18
Wholesale trade	10.28	10.65	10.76	10.70	389.61	403.64	409.96	406.60
Retail trade	6.49	6.76	6.78	6.77	186.91	192.66	196.62	194.98
Finance, insurance, and real estate	9.48	9.87	9.98	9.92	337.49	352.36	361.28	353.15
Services	9.30	9.75	9.81	9.76	301.32	316.88	320.79	316.22

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry, seasonally adjusted

Industry	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990p/	May 1990p/	Percent change from: Apr. 1990-May 1990
Total private2/	$9.60	$9.85	$9.88	$9.92	$9.95	$9.99	0.4
Current dollars	4.77	4.74	4.75	4.76	N.A.	N.A.	(4)
Constant (1977) dollars3/	13.52	13.56	13.43	13.47	13.39	13.55	1.2
Construction	10.42	10.55	10.65	10.71	10.73	10.85	9
Manufacturing	9.97	10.10	10.21	10.26	10.34	10.35	.1
Excluding overtime3/	12.56	12.79	12.82	12.86	12.93	12.93	0
Transportation and public utilities	10.28	10.57	10.62	10.65	10.75	10.70	- .5
Wholesale trade	6.49	6.69	6.71	6.75	6.76	6.78	.3
Retail trade	9.45	9.75	9.78	9.82	9.90	9.90	0
Finance, insurance, and real estate	9.33	9.62	9.65	9.70	9.78	9.78	0
Services							

1/ See footnote 1, table B-2

2/ Includes mining, not shown separately, because its seasonal component is too small to be separated out with sufficient precision.

3/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

4/ Change was 0.2 percent from March to April 1990, the latest month available.

5/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available

p/ = preliminary

ESTABLISHMENT DATA

Table B-3. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1989	Mar. 1990	Apr. 1990p/	May 1990p/	May 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr 1990p/	May 1990p/
Total private	127.5	127.5	128.6	129.8	127.6	129.5	130.2	130.3	130.0	130.0
Goods-producing industries	102.6	99.1	98.2	101.8	102.4	102.2	102.9	102.3	101.0	101.8
Mining	81.2	85.1	87.1	88.3	81.8	87.1	87.8	87.7	88.0	89.1
Construction	141.8	131.1	134.7	143.6	138.2	149.5	150.6	146.7	139.5	141.1
Manufacturing	96.0	93.6	91.6	94.3	96.4	93.7	94.3	96.4	94.1	94.8
Durable goods	94.2	91.5	89.2	92.2	94.5	90.3	91.7	91.9	91.4	92.5
Lumber and wood products	104.4	108.4	101.8	103.8	103.7	105.1	102.5	103.9	103.3	103.5
Furniture and fixtures	110.9	108.6	105.6	107.2	112.9	110.5	109.7	108.9	108.5	109.2
Stone, clay, and glass products	91.5	85.3	87.0	89.2	89.3	89.6	89.4	88.4	87.2	87.5
Primary metal industries	68.1	63.6	63.9	65.8	66.2	64.8	64.9	65.2	64.0	65.9
Blast furnaces and basic steel products	52.9	50.5	50.4	51.2	52.3	51.3	50.6	50.0	50.6	51.2
Fabricated metal products	91.2	88.4	85.5	89.3	91.7	86.7	88.0	88.9	88.5	89.7
Machinery, except electrical	93.5	92.6	89.1	92.2	93.7	92.7	92.9	91.9	91.3	92.4
Electrical and electronic equipment	97.1	96.0	92.7	94.5	98.4	95.7	96.4	96.9	96.1	95.8
Transportation equipment	101.4	96.8	92.8	98.0	100.5	85.7	93.5	95.0	95.2	96.5
Motor vehicles and equipment	91.8	83.3	80.5	86.7	90.2	67.0	80.5	82.5	80.7	84.6
Instruments and related products	115.0	115.0	113.3	116.7	115.8	115.2	115.8	114.7	116.1	117.5
Miscellaneous manufacturing	86.1	85.9	82.7	85.6	86.6	87.7	87.6	86.8	84.9	86.0
Nondurable goods	98.5	96.6	95.3	97.4	99.5	98.8	98.3	98.0	98.2	98.6
Food and kindred products	99.7	98.7	98.5	101.6	103.5	105.1	104.7	104.7	105.4	105.9
Tobacco manufactures	64.5	64.9	59.2	60.4	69.6	69.0	68.9	67.1	66.4	66.7
Textile mill products	81.2	76.1	74.7	77.0	81.5	78.3	77.2	76.6	76.9	77.4
Apparel and other textile products	85.5	80.1	77.9	80.6	85.4	82.5	81.5	79.7	80.4	80.5
Paper and allied products	101.5	100.8	100.0	102.2	102.5	102.5	102.0	102.1	102.5	103.2
Printing and publishing	136.9	141.0	138.6	139.1	137.8	140.0	140.5	140.7	139.7	139.9
Chemicals and allied products	100.4	101.2	101.4	101.0	100.5	102.6	101.9	101.5	101.7	101.4
Petroleum and coal products	83.3	82.9	84.8	85.1	83.5	83.9	85.5	86.4	85.5	84.5
Rubber and misc. plastics products	119.7	115.6	112.6	116.8	119.6	114.5	114.2	115.1	114.8	116.8
Leather and leather products	54.9	51.6	50.1	51.4	54.7	52.4	53.3	53.8	51.8	50.8
Service-producing industries	141.4	143.2	145.4	145.3	141.5	144.4	145.3	145.8	146.1	145.6
Transportation and public utilities	116.7	118.7	119.2	120.7	117.3	119.4	120.3	120.6	120.4	121.1
Wholesale trade	126.3	127.4	128.4	128.9	126.1	128.7	128.9	129.0	129.3	129.2
Retail trade	126.7	126.1	127.8	128.2	127.2	128.6	128.8	128.7	129.4	128.7
Finance, insurance, and real estate	141.4	144.0	146.4	144.8	141.9	144.3	145.2	145.8	146.6	145.3
Services	167.8	173.4	175.4	174.5	167.5	172.7	174.0	175.1	175.8	174.6

1/ See footnote 1, table B-2.

p = preliminary.

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonagricultural payrolls, 349 industries1/											
Over 1-month span:												
1988	60.7	63.5	63.8	62.8	61.5	67.2	63.6	58.0	55.4	63.9	68.2	64.6
1989	68.3	60.5	61.0	58.2	59.6	59.7	55.6	57.4	47.9	55.3	60.9	51.9
1990	58.5	57.9	52.3	p/47.1	p/52.3							
Over 3-month span:												
1988	64.8	65.6	69.5	70.2	71.1	71.9	71.2	64.2	65.3	70.1	73.4	74.6
1989	71.6	70.1	64.5	61.9	61.6	60.7	61.6	53.4	54.6	55.7	57.2	60.2
1990	58.2	58.9	p/51.9	p/48.0								
Over 6-month span:												
1988	69.9	70.2	71.5	73.9	73.9	69.1	70.2	74.6	73.5	73.9	74.5	75.8
1989	75.1	69.5	68.2	66.9	63.0	57.9	57.7	60.2	53.4	58.3	58.3	60.2
1990	p/55.3	p/53.9										
Over 12-month span:												
1988	76.2	76.1	74.8	74.6	75.8	74.9	78.1	75.5	75.5	74.8	74.9	74.1
1989	73.2	73.6	69.6	67.6	66.6	62.6	63.6	63.2	60.7	p/57.2	p/56.6	
1990												
	Manufacturing payrolls, 141 industries1/											
Over 1-month span:												
1988	58.5	56.0	55.0	59.9	58.5	61.7	59.6	51.1	49.3	62.8	64.9	58.5
1989	52.9	53.5	53.2	49.6	46.8	48.6	49.6	45.4	34.8	52.1	48.2	44.7
1990	45.4	49.3	43.6	p/45.7	p/45.0							
Over 3-month span:												
1988	63.1	61.0	62.4	64.9	67.9	67.0	64.5	58.2	62.1	66.7	71.3	70.9
1989	67.4	65.8	55.7	51.8	49.3	48.6	47.9	34.0	41.8	41.5	44.5	41.1
1990	42.2	41.5	p/44.3	p/40.8								
Over 6-month span:												
1988	66.3	66.3	67.7	69.5	66.7	64.2	66.0	70.9	68.8	69.9	71.6	74.1
1989	69.5	58.5	55.7	52.8	48.9	39.0	40.1	41.8	34.4	57.9	48.8	43.6
1990	p/57.9	p/56.5										
Over 12-month span:												
1988	73.8	70.2	70.9	71.6	72.0	69.9	70.9	69.1	71.6	70.2	69.9	67.0
1989	63.1	63.8	57.1	53.5	49.6	42.9	43.5	42.2	37.6	p/36.9	p/34.0	
1990												

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p=preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one- half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative HAMILTON. Thank you very much.

Now looking at your summary, what emerges here as the best picture of the economy? Is it an economy that is weakening or is it an economy that has bottomed out and is starting back up, or is it an economy that is just kind of drifting?

Mrs. NORWOOD. That's really, of course, very difficult to tell. What we are seeing I think is 3 months of no growth. We are not charging downward. On the other hand, there is no sign yet that we are moving upward. It could go either way.

Representative HAMILTON. This net job growth of about 165,000. How many of that is the hiring for the census?

Mrs. NORWOOD. About 145,000.

Representative HAMILTON. So only about 20,000 then would be private sector growth?

Mrs. NORWOOD. Yes, and, of course, that is not statistically significant. So I would be inclined to say that just about all the growth reflects the Census temporary hiring.

Representative HAMILTON. I see.

Mrs. NORWOOD. And that there is really essentially no growth in the private sector.

I think from these data we cannot say anything more than that for 3 months we have had really no job growth in the private sector.

Representative HAMILTON. And the growth that we have, in addition to the Government sector, has been in only a few industries, health being the major one I presume?

Mrs. NORWOOD. Yes, health services.

Representative HAMILTON. Health services. Is there any other industry that stands out?

Mrs. NORWOOD. Not really. There has been little movement in other industries. Earlier in the recovery period business services was the large contributor to growth, and that is no longer happening.

Retail trade, which had been growing strongly in the earlier years of the recovery, seems to have held level essentially over the year.

Representative HAMILTON. So if you look at construction and manufacturing and retail and wholesale trade and so forth, none of those are showing much growth, except in health care.

Mrs. NORWOOD. Except health services and government.

Representative HAMILTON. And government?

Mrs. NORWOOD. Which is largely due to the Census hiring, and that should probably continue through the summer.

Representative HAMILTON. You mean those jobs will go through the summer?

Mrs. NORWOOD. For the Census Bureau. Those are temporary workers who were hired for a period of time until the census is completed.

Representative HAMILTON. Now in automobile manufacturing, why are they working overtime when automobile sales are falling?

Mrs. NORWOOD. I think that is a very good question, and there are, I believe, as I said in my statement, two possible answers. One is that this is a sharp change. It's a large change, and it's a single

month of change, and we can't be certain that it's really there. We will have to wait another month or two to see.

The other explanation, which to me seems more sensible, is that the auto companies and other employers, too, are trying to keep their inventories extremely lean.

It is much easier to adjust production by adjusting the hours of people on your payroll rather than hiring workers and then getting rid of them. That is much more expensive and it's much more traumatic.

Representative HAMILTON. Does your data tell you whether the increase in hours in the automobile industry is throughout all of the automobile industry or just in particular segments?

Mrs. NORWOOD. Well, Mr. Plewes is just telling me that—well, he can tell you himself.

Mr. PLEWES. We saw the overtime only being paid in about 15 assembly plants that produced models that were moving well. It wasn't widespread throughout the auto industry.

Representative HAMILTON. Which ones are moving well?

Mr. PLEWES. I don't have that with me, sir. We can get that. We just called the auto companies yesterday.

Representative HAMILTON. Does anything stand out in your mind? I mean was it the Japanese-owned factories, for example, in the United States, or was there any pattern to it?

Mr. PLEWES. I didn't make that distinction, sir.

Representative HAMILTON. You did not make that distinction. All right.

Mrs. NORWOOD. But I think that would support the point that the companies are using hours to adjust their inventories rather than going out and hiring workers when they want to expand production and firing them when they want to adjust their inventories downward.

In many ways it's important that they remain cost conscious. So it's not entirely a bad thing, but we should recognize that there does not seem to be any employment growth in automobiles and that there continues to be a decline in manufacturing. Of course, we have had that for some time. We have lost 290,000 jobs over the year in manufacturing.

What is considerably different now is the situation in the construction industry which is in fact losing jobs.

Representative HAMILTON. Now on labor force growth, you commented on that. Where is that comment in your statement?

Mrs. NORWOOD. Oh, it's down at the bottom of page 3, I think.

Representative HAMILTON. It's at the top of page 4, the labor force growth has slowed considerably in recent months. The labor force growth in the 1970's was an average annual growth rate of 2.66 percent, and then during the 1980's it grew at 1.67 percent, and now during the 12 months ending in April it has grown only 1.03 percent.

What can you tell us about how the labor force will grow in the 1990's? Is this 1.03 percent going to be the pattern?

Mrs. NORWOOD. We are going to see very much slower labor force growth.

Representative HAMILTON. We are not going to go back to that 2.66 percent of the 1970's?

Mrs. NORWOOD. No. We expect that the labor force will be growing at about half the rate of the earlier period, and the reason for that is largely due to declines in birth rates. So there haven't been as many children born to grow up to labor force age.

Representative HAMILTON. Do the immigration figures have any impact on labor force growth?

Mrs. NORWOOD. Sure they do.

Representative HAMILTON. A big impact?

Mrs. NORWOOD. Yes, and they are difficult to estimate, very difficult.

Representative HAMILTON. Very unreliable data?

Mrs. NORWOOD. Yes, I believe so. Obviously the Census Bureau does the best job it possibly can with them, but it is extremely difficult to be certain what they are.

Representative HAMILTON. So your projection of labor force growth during the 1990's is in what range?

Mrs. NORWOOD. It's about 1.6 percent.

Representative HAMILTON. Each year, and that is an——

Mrs. NORWOOD. On average throughout the rest of the century, but we are seeing many fewer teenagers, for example. We had a labor force decline of about 360,000 teenagers from May to May. We had an increase of about 1,400,000 from May to May in the overall civilian labor force, and I would say that that's roughly half what we had in the 1970's.

So it makes life much easier. You're always on a treadmill and you don't have to keep running faster just to catch up. On the other hand, when the labor force increases very rapidly, that tends to stimulate job growth. So the fact that it's growing more slowly means there is probably somewhat less stimulus there.

Representative HAMILTON. Now the thought was during the 1970's that when these housewives and teenagers came into the market and got experience, then productivity would go up. Did that happen?

Mrs. NORWOOD. One of the views has been, you're right, that as they became better educated they would improve productivity. They are not showing up in our productivity numbers.

Mr. Dean, our expert on productivity, is here. He and his staff have been doing some work on the quality adjustments of labor.

Do you have anything to add to that?

Mr. DEAN. Yes. Our preliminary data show that prior to 1973 change in the composition of the labor force based on experience and education was adding about two-tenths of a percent per year.

Representative HAMILTON. Two-tenths of a percent a year to what?

Mr. DEAN. To productivity.

Representative HAMILTON. OK.

Mr. DEAN. After 1973 at the height of the entry of the baby-boom people into the labor force that figure dropped to zero. After 1979 it increased to about three-tenths of a percent per year, and that, we think, was primarily because of the growing experience level of an aging labor force.

Representative HAMILTON. That was now a decade ago.

Mr. DEAN. That's right. It was around 1979 or 1980 that entrance of the baby-boom people into the labor force began to taper off.

Representative HAMILTON. So the improvement in productivity growth during the 1980's, was that largely due to the composition of the labor force?

Mr. DEAN. No. That was an important contributing factor, but so was an increasing ratio of capital to hours.

Mrs. NORWOOD. Especially in manufacturing.

Representative HAMILTON. Is there anything to suggest that there will be further improvement in the composition of the labor force so that our productivity will go up?

Mrs. NORWOOD. It's hard to know about the exact relationship of productivity to groups in the labor force, but we know that between now and the year 2000 minority groups are going to be a larger proportion of the labor force, and we know that many members of those minority groups have not had the advantage of education and training and job experience that other people have.

Therefore, there should be some concern because many of the kinds of jobs that we're projecting will be expanding most rapidly are the jobs that require training and knowledge and cognitive abilities. So that you may be seeing an even greater disparity between those who succeed and those who do not, because of the tremendous need of the economy for people with education and training and the problem that many of our minorities have in getting it.

Representative HAMILTON. Do you see anything in the figures that would suggest that there will be an increase in productivity growth in the decade ahead?

Mrs. NORWOOD. Well, I would hope. I'm always hopeful that we will see increases in productivity growth. I do not believe that we are going to see it from the composition of the labor force.

Representative HAMILTON. Both in terms of numbers and in terms of quality?

Mrs. NORWOOD. I think that where we might see it from is, as Mr. Dean has said, a greater recognition of the need for new technology and capital investment, but also the greater cost consciousness that we're clearly seeing in manufacturing. We are reducing production much less than we are reducing employment, and if that continues, then obviously that should show up in increased productivity.

When we move into the service-producing sector, what we have been seeing until now is a tremendous increase in employment growth in services, and that, of course, is a question of how they are used.

Representative HAMILTON. During the period of 1948 to 1973 we had a productivity growth of about 2½ percent roughly, and I guess the question is do you think in the 1990's we will return to that, or does that really look out of reach?

Mr. DEAN. I can't see that there are factors operating that are comparable to the factors prior to 1973. It seems to me it would be extremely optimistic to expect that we would return to the pre-1973 rates.

Mrs. NORWOOD. There are some analyses that suggest that maybe that is the wrong way to look at it, that what we should recognize is that the postwar period of high-productivity growth may in fact have been different from the longer range, basic slow rate of productivity growth.

I'm not sure that that's so. It's very hard to get the really good data from the earlier period, but there are two ways of looking at it.

Representative HAMILTON. As in all economic phenomena. [Laughter.] If there are only two, we are fortunate.

Mrs. NORWOOD. William Baumol from Princeton has done a good bit of work on this, and he argues that some of these changes are not different because we are looking at it the wrong way, that the real change was during the postwar years and, second, that the use of labor in this country is not so different from the use of labor in other countries.

Representative HAMILTON. I want to have you comment on the consumer price index. I guess you didn't refer to that in your statement.

Mrs. NORWOOD. No.

Representative HAMILTON. We've had some articles appear recently suggesting that the CPI does not properly measure price increases, and one of the comments is that it understates the impact of increases in property taxes on the housing component of the CPI.

Do you want to comment on that, on the CPI? There are really three criticisms of it. One relates to housing and the property tax, the second relates to the health care prices and the third relates to the product sample for prices in the CPI being out of date.

Let's discuss those a little bit.

Mrs. NORWOOD. All right. Let me take a stab at that and then ask Ken Dalton to fill in.

On the first issue of property taxes. The CPI housing component actually reflects property taxes through the cost of shelter approach that we had included in the CPI. It seems to us to be behaving in an economic sense quite well. So I would reject that criticism. I don't think that it is valid.

The second issue, or let me take the third one first, and that is that the CPI product groupings are out of date. The CPI is a base-weighted index of the Laspeyres' type, and economic research has certainly shown over a period of years that that creates a somewhat upper bound on the cost of living.

Nevertheless, research that we have done at BLS over several decades has shown that the differences are very small, that the effect of reweighting is really very small.

Representative HAMILTON. Now your sample is based on a 1982-84 survey?

Mrs. NORWOOD. That's right.

Representative HAMILTON. Do you make adjustments in that survey?

Mrs. NORWOOD. That's the other point that I wanted to make, and that is that the overall weights are kept constant because of the base-weighted nature of the index. That's the theoretical construct of the index that we really believe is correct.

But most people do not understand that there is resampling of the specific item in all the cities over a 5-year period. So that one-fifth of the outlets in the CPI and the specific items that are priced within those outlets are resampled every single year. So it is not true, for example, to say that you have, let's say, a cotton shirt and

that it goes out of existence and everybody is using dacron and cotton shirts and that we are not reflecting that. We would absolutely reflect that as it happens. So it's a misunderstanding.

Representative HAMILTON. With regard to this criticism, which is basically that the sample is out of date, your testimony is that it is not out of date?

Mrs. NORWOOD. That's right. Now I have to say that we have the funds to resample over a 5-year period. You know, we would like to resample more frequently than that, but I think that on the whole it is a pretty good representation.

Now the other question that goes along with that is whether we should update the weights more frequently, the weights themselves for clothing and food and so on, and we are studying that to try to figure out exactly when we should. We have had a custom of doing it about every 10 years in the United States. We are fairly comfortable with that, but we are examining that all the time to see whether it is possible to have some empirical evidence that we should do it differently.

Representative HAMILTON. So the CPI then does not really lag very far behind the market, the reality?

Mrs. NORWOOD. I don't believe that it does. Now the third, or your second comment, concerns health care. There is a valid criticism I think concerning the pricing for health care. The specific reason for that is that health care is extremely difficult to measure. It's full of technological events, all kinds of computerized equipment, and changes in treatment. It is very difficult to look at a health service as constant over time and to get the information that is necessary to evaluate the changes and to adjust the price of that change.

We are working on that, and Mr. Dalton can tell you something about some of our work in that area, but I think it should be understood that that's a very difficult area. It's one in which we should be doing I believe a great deal more research.

Now I should tell you that I just happened to be thinking about this a good bit because I'm giving an address at the Canadian Statistical Society on Monday, and I've been looking at the Canadian CPI and the U.S. CPI, and they are very similar in some ways. The Canadians have a very good CPI, but because they have comprehensive health service provided essentially by the Government, they don't price health services in the CPI. It's just not there on grounds that the Government is providing it.

So it's much easier for countries like that. We are in a much more difficult position because health services now are about 11 percent of our GNP, and it seems to me that it's terribly important for us to have better measures in general both of the output of health services and eventually the input of them.

Representative HAMILTON. The problem here is in part at least measuring the change in the quality of health care, isn't it?

Mr. DALTON. That's exactly the problem. Initially defining what the output of the industry is, what is the health services industry delivering in particular.

Representative HAMILTON. Do you make any adjustments, quality adjustments for health care?

Mr. DALTON. Yes, we do on a month-to-month basis. Any of those quality changes we can identify, we attempt to make adjustments.

Representative HAMILTON. Can you say, for example, in looking back over the last year that the quality of health care has improved by so much during the past year?

Mr. DALTON. I don't think so. If we could say that, then we could adjust the index exactly for it.

Representative HAMILTON. But you can't do that?

Mr. DALTON. We can't do that, not at this point.

Representative HAMILTON. Do you have a similar kind of problem with quality in other components of the CPI?

Mr. DALTON. Yes, we do.

Mrs. NORWOOD. I don't think it's as severe though.

Mr. DALTON. Perhaps not as severe.

Representative HAMILTON. In what areas?

Mr. DALTON. I would say in apparel, although we have made some very substantial gains in that area in recent years, and some of the other services where the output, or what it is exactly that you're pricing, or trying to hold fixed in quality over time is nebulous.

Mrs. NORWOOD. We happen to have a home on a lake in Maine, and I was up there over Memorial Day weekend. While I was there the electricity was off for a couple of hours. If that happens more frequently, it would be a deterioration in electricity services. You're not having the same quality. You have to restart everything and change all the clocks and you worry about the freezer and so on, but we don't know how to adjust for that. We don't know when it's happening and we don't know how often it happens. So there are a lot of practical, everyday issues of that kind that are extremely difficult.

I am very concerned about medical care measurement. I am also very concerned about the whole issue of technological change, and quality adjustment, and the need for resampling in the producer price area where the prices for products are changing all the time. We have in that program about a 7-year cycle of resampling, and I think it's far too long.

Mr. DALTON. On average.

Mrs. NORWOOD. That's on average, and I think it's far too long considering the extent of technological change.

Representative HAMILTON. In this unusual surge of employment in health services, where in the health-care industry is that occurring and why is it occurring?

Mrs. NORWOOD. Well, I think the why is probably that the population is getting older and more health conscious.

Mr. PLEWES. It's occurring in two places. It's occurring in hospitals and it's occurring in offices of practitioners, as we classify them in the standard coding.

Representative HAMILTON. It's not in nursing homes?

Mr. PLEWES. Not to a great extent. It's growing there, but adding additional workers in the offices of physicians is one major development that we have seen over time as physicians do more things in their offices.

Representative HAMILTON. Is there any part of the population that is benefiting from the rapid expansion of employment in the health care industry or is it across the board?

Mrs. NORWOOD. I'm sorry, I didn't hear that question.

Representative HAMILTON. Is there any part of the population that benefits from this increase in employment in the health care industry?

Mrs. NORWOOD. If what you are getting at is the kind of jobs that we have in the health care industry, I think we have basically two kinds, the very good, sophisticated, highly educated jobs and then——

Representative HAMILTON. I'm wondering if the consumer of health care, is he or she getting better health care because of this surge of employment, and whether or not particular segments of the population are getting better health care because of this surge in employment?

Mrs. NORWOOD. Tom Plewes was pointing out that one of the big areas of increase is in physicians' offices because physicians are providing more services and more procedures and more tests in their own offices because it's advantageous for them to do that.

I would like to point out that that's the sort of thing that changes the pricing of a visit to a physician because a physician before was not performing these services and now that he has hired people and is doing that, it's very hard to keep up with it.

In terms of whether people are benefiting, obviously if you can go to a physician's office and get everything done, you don't have to go running around to laboratories and other places to have the blood drawn and have other procedures performed. So there are clearly benefits for people.

Is it improving the health of people? Well, as you know, that is a very critical issue and there is a great deal of work going on about it. I can tell you from experience that if there are problems that somebody has that require a lot of complicated equipment, you really never question that. You just go ahead and do it.

Representative HAMILTON. Let me ask a question or two about foreign-owned firms. You know, there is a lot of interest in that area in the Congress. As I understand it, the data that we now have on foreign investment comes from the Census Bureau, not from you, basically.

Mrs. NORWOOD. The Bureau of Economic Analysis.

Representative HAMILTON. Yes, and there are problems with that data.

Mrs. NORWOOD. Yes.

Representative HAMILTON. What do you do with respect to foreign investment in the Bureau of Labor Statistics? What kind of information do you have and how do you get it?

Mrs. NORWOOD. We do not have any surveys which attempt to measure foreign investment. That is not within the area of responsibility that we have in this statistical system. We are, of course, very interested in it, especially because of our export-import price system and other analytical work that we do, but the data on investment are collected either by the Federal Reserve or by the Bureau of Economic Analysis.

What we are doing is looking at the possibilities at your request, Mr. Chairman, your's and Mr. Obey's, of trying to see whether we could take some of the data from BEA essentially and link it through our business list to employment, and Tom Plewes can tell you all about that.

Mr. PLEWES. Basically, that's correct, we don't identify it ourselves. The BEA has the list, the direct investment survey. What we would do is to match their files——

Mrs. NORWOOD. What we could do.

Mr. PLEWES. Yes, what we could do is to match their files with our large database which consists of employment, standardized industrial classification and payrolls out there in the private sector, and match that in turn with information that we have on occupational staffing patterns of those industries. So that will give us a good basis for determining, if you will, an employment history, a payroll history, and an occupational history of firms that are associated with foreign investment.

We did this on a pilot basis back in 1986 taking seven of their States from a 1984 foreign investment survey and matching them with our file of employment payrolls and found out that we could do that fairly well. We have not done that third part, which is matching the occupations.

Representative HAMILTON. OK. Now the problem, as I understand it, with the information from the Census Bureau, the BEA, is that the data is not very timely. It's 2 years out of date or 3 years out of date.

Mr. PLEWES. In many cases that is correct.

Representative HAMILTON. And that it is not collected at an industry level, but it's collected at an enterprise level.

Mrs. NORWOOD. Yes.

Mr. PLEWES. That's correct.

Representative HAMILTON. And that's it's not comparable to equivalent data from U.S. firms.

Mr. PLEWES. That point isn't quite clear, but I think that that's correct also.

Representative HAMILTON. The question then is, in the process that you are describing, can you correct these deficiencies?

Mrs. NORWOOD. Well, we can do some matching so that we could take the data that they had, I mean assuming we had the resources to do this of course. One could take the data that they supply to us and match them to the enterprises in our business list and then go on from there with the occupational employment data that we have. But that process is not going to improve the basic data that they collect. We can't take their survey data and improve them in any way.

Representative HAMILTON. Are there weaknesses in that Census data that we ought to be concerned about?

Mrs. NORWOOD. We have not really done a careful review of the quality of those data.

Representative HAMILTON. So you couldn't suggest to us remedies?

Mrs. NORWOOD. No, I don't think we are in a position to do that at this point.

Representative HAMILTON. Is it correct that you have been concerned about the quality of the Census data and that you have been working to improve it?

Mrs. NORWOOD. Well, let me make clear that there are two sets of data here I think we are talking about. One is the investment survey, which is done by the Bureau of Economic Analysis, and we know really very little about that. The other is the list of business establishments to which those data would be matched. Now we know a great deal about the lists.

Representative HAMILTON. Who develops the data on the business establishments?

Mrs. NORWOOD. Well, BLS has a list which——

Representative HAMILTON. You have the data?

Mrs. NORWOOD. Well, there are two lists, or there are many lists in existence as a matter of fact.

Representative HAMILTON. You're getting me pretty confused.

Mrs. NORWOOD. It's a confusing issue.

Representative HAMILTON. The investment survey is in BEA, right?

Mrs. NORWOOD. That's right.

Representative HAMILTON. And that's not your job.

Mrs. NORWOOD. No.

Representative HAMILTON. You don't have anything to do with it?

Mrs. NORWOOD. No, we don't.

Representative HAMILTON. You don't work with them on it to improve the quality of it?

Mrs. NORWOOD. No.

Representative HAMILTON. It's just there, right?

Mrs. NORWOOD. That's right.

Representative HAMILTON. Then the second list you talked about is the business establishment list. That is your list?

Mrs. NORWOOD. We have a business establishment list. The Census Bureau also has a business establishment list. The Office of Management and Budget has encouraged us to develop our list further because it's more complete and more up to date, and to make it available as a single list for the whole statistical community. We have been given funds by the Congress to start that. It's a multiyear project and it's well underway.

There are some differences of opinion within the statistical system about that approach, but in any case, whether Census uses or it doesn't, we certainly are moving forward and we will make it available for statistical purposes to agencies which need it.

Representative HAMILTON. Well, of course, I appreciate that, and we appreciate your interest and concern about it. From our standpoint here, and the overall point is obvious to you, and that is we need to have better information about these foreign-owned firms.

Mrs. NORWOOD. I would agree with that completely, Mr. Chairman.

Representative HAMILTON. And anything that you can do in coordination with the Census and the BEA will be very much appreciated, of course, by us.

Mrs. NORWOOD. You should understand, of course, that these matchings are rather extensive and comprehensive and they don't come without cost. Nothing does it seems.

Representative HAMILTON. I've figured that out. [Laughter.]

The teenagers coming into the job market, we have fewer of them coming in now; is that right?

Mrs. NORWOOD. That's right.

Representative HAMILTON. Does that mean for our teenagers it's going to be tougher to get jobs this summer?

Mrs. NORWOOD. It should make it easier for them to get jobs. There are fewer people and there is therefore less competition assuming that there are employers providing jobs for summer youth. There should be about 300,000 fewer 16- to 19-year-olds from April to July.

Representative HAMILTON. How many fewer?

Mrs. NORWOOD. About 300,000 fewer than last year. So that should make it easier for them to be successful in their search for work.

Representative HAMILTON. You gave us the figure for what age group, the 300,000?

Mrs. NORWOOD. Sixteen- to nineteen-year-olds.

Representative HAMILTON. Do anything in the data tell us anything about minority employment and unemployment? Has there been any improvement in the situation for blacks or Hispanics?

Mrs. NORWOOD. Blacks and Hispanics have had increases in employment, but they still have very high rates of unemployment. Their employment-population ratios have not changed a great deal over the last year.

Representative HAMILTON. So there really hasn't been much improvement?

Mrs. NORWOOD. No, I don't really think so. If you look at it in percentage terms sometimes you can see some changes, but you're talking about small bases. What I thought we might do, Mr. Chairman, is do an analysis of that and perhaps report on it to you at our next hearing.

Representative HAMILTON. We would appreciate that.

There isn't any evidence now that the labor market is tightening sufficiently so that employers are having to bring on board more minorities or more low-skilled people?

Mrs. NORWOOD. I think some of that is happening at the low end of the wage scale quite clearly. There is more competition for jobs, and theoretically that should raise wages to avoid shortages as always happens.

Representative HAMILTON. Then, finally, I wanted to ask you a question or two about job training. Do you conduct a survey of firms to determine what kind of job training they do?

Mrs. NORWOOD. No, we do not on a regular basis. We have occasionally conducted a small supplement on how workers get their training using the Current Population Survey.

Representative HAMILTON. Are you preparing to do that?

Mrs. NORWOOD. I have set up a task force to look at what we know and what we don't know about the extent and cost of employer training. We would like to do something in that area, at least as a pilot program, and I have discussed it with the education people

in connection with the President's goals on education, but I don't know where that is going. I believe that it would be useful.

Representative HAMILTON. Will you keep us up to date on that?

Mrs. NORWOOD. Yes, we would be glad to.

Representative HAMILTON. Thank you very much.

Mrs. NORWOOD. Thank you, Mr. Chairman.

Representative HAMILTON. We appreciate your appearance this morning.

[Whereupon, at 10:25 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, AUGUST 3, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:33 a.m., in room 2203, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representatives Hamilton, Solarz, and Wylie.

Also present: William Buechner and Chris Frenze, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

This morning, the committee meets to conduct its monthly review of the employment and unemployment situation. We are pleased to welcome again as our witness, Commissioner Janet Norwood of the Bureau of Labor Statistics, who is here with her colleagues to testify on the employment and unemployment data for July.

The figures released this morning by the Bureau suggest that the economy has shifted into an even lower gear from the slow growth of the first half. Employment declined by 435,000 in July, according to the household survey, and the unemployment rate rose by three-tenths of 1 percent, the largest 1-month increase in more than 4 years.

Payroll employment in private industries declined by 45,000, reflecting significant job loss in construction and a continued decline in manufacturing. Coming on top of other recent indicators, it also shows a weakening of the economy.

This morning's employment and unemployment data give serious cause for concern about the current state of our economy.

We will turn now to Commissioner Norwood for her testimony on the July data.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS

Mrs. NORWOOD. Thank you very much, Mr. Chairman. As usual, I have with me Kenneth Dalton on my right and Thomas Plewes on my left. We are all very happy to be here.

The Nation's job market weakened in July. The civilian jobless rate, which had showed little movement for nearly 2 years, increased by three-tenths of a percentage point in July to 5.5 percent, and the overall unemployment rate rose to 5.4 percent. Employment, as measured in both our household and our business surveys, was down over the month.

The number of jobless persons rose by about 370,000 in July to 6.8 million. Although unemployment increased for men in the 25 and over age group, a disproportionate share of the overall increase was among teenagers. This group typically enters the labor force in very large numbers between April and July each year, seeking either permanent or summer jobs. Even though a smaller proportion of teenagers participated in the labor force this summer, more of those who did were unable to find work.

The unemployment rate for teenagers last month was 16.3 percent, about a percentage point higher than in the past 2 years.

While we cannot say for certain why teenagers had more difficulty in the labor market this summer, we do know that job growth in the retail trade and services industries, which employ many teenagers, has slowed considerably this year.

Young blacks and Hispanics are generally less likely than their white counterparts to participate in the labor force, and those who are in the labor force are more likely to be unemployed. Minority youth account for a very large share of the Nation's high school dropouts, and, as you know, dropping out of high school leads, almost inevitably, to problems in the job market.

In 1989, only about 3 of every 10 black high school dropouts were employed. Lack of a high school education is by no means the sole cause of the employment problems of minority youth, however.

In a survey we conducted last fall, we found, for example, that, of the black and Hispanic recent high school graduates who had not gone on to college, only about half were employed, whereas the proportion among their white counterparts was about three-fourths. Thus, the causes of the labor market difficulties faced by minority youth are numerous, varied, and not clearly understood.

Certainly, given their growing representation in the youth population, the problems of these young people will become even more visible in the future.

The number of payroll jobs in private industry declined by 45,000 from June to July. This was the second decline in private industry employment this year, but, unlike the large drop last April, the change in July does not appear to be associated with unusual seasonal movement. Total payroll employment declined by 220,000 in July, but about 160,000 of this amount came from reductions re-

sulting from the planned phasedown of collection activities related to the decennial census.

The largest employment decline in private industry was in construction, which, after seasonal adjustment, dropped by 50,000 in July. The number of jobs in this industry is now more than 100,000 below the level of last fall.

The weakness in July was spread throughout the industry, but residential building has accounted for a large share of the recent job losses in the industry.

Factory employment, which began to slide in the spring of 1989, continued downward, but at a much slower rate than in the early months of the year. The number of jobs declined in electrical equipment and, not unexpectedly, also in those industries that produce goods used by the construction industry.

Following a strong job gain in June, employment in services failed to increase in July. Health services, which had added an average of 50,000 jobs each month in the first half of the year, expanded by only half that amount in July.

Many services industries, including business services, lost jobs. As we have often discussed, the services industry has been the major engine of job growth during the current economic expansion. But that engine seems to have sputtered in July.

The largest over-the-month decline was in government, where 160,000 temporary workers associated with the decennial census completed their assignments. We should be seeing the end of the large movements resulting from census activity within the next few months.

In summary, some deterioration of the employment situation occurred in July. Employment in construction and manufacturing continued to weaken.

With the lack of growth in the private service-producing sector, there was no offset to those losses. Unemployment rose, especially for teenagers, but also for adult workers.

Mr. Chairman, I have included as an addendum to my statement an outline of the system that we are setting up within the Bureau of Labor Statistics to attempt to measure over the coming months and years the effect or possible effect or impact on the employment situation of possible declines in defense expenditures in the economy. There are no data in that discussion but, because it is our custom to discuss with this committee our planned activities, I thought it would be of use to you.

We would be glad to try to answer any questions.

Representative HAMILTON. All right. Thank you very much.

[The addendum and table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follow:]

ADDENDUM TO STATEMENT OF HON. JANET L. NORWOOD

Defense-related employment

One area in which there is increasing interest is the potential impact of possible declines in defense expenditures on the economy, and I am often asked what we at the Bureau of Labor Statistics can do to monitor these changes. Although it is still too early to provide any estimates, I would like briefly to review with the Committee our plans for monitoring these developments in the future.

We have several efforts under way. Within our business survey, we have developed a special series to measure employment changes in six industries which rely on defense expenditures for a majority of their output. These industries currently employ about 1.5 million workers. Although this series does not provide a comprehensive or exact measure of jobs attributable to defense spending, it can be useful in analysis of the issue. In addition, information from our Mass Layoff Statistics program can help to identify job losses that can be attributed to defense-dependent industries. We are also developing special codes for both our large payroll and our mass layoff surveys that will enable business respondents to identify defense-related changes in employment at the business establishment level.

We believe that the impact of defense cutbacks on employment and unemployment is likely to be far more pronounced at the local than at the national level. Therefore, we are identifying local areas which have significant amounts of defense-related employment, by using the reports on industry employment and wages filed with the unemployment insurance system. We will then review the unemployment situation in those areas with the data from our Local Area Unemployment Statistics program. Finally, we are working with the Department of Defense to develop additional avenues for monitoring the impact of defense cutbacks on the job market.

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989										
July	5.3	5.3	5.3	5.2	5.3	5.3	5.3	5.3	5.3	.1
August	5.1	5.3	5.3	5.2	5.2	5.3	5.2	5.3	5.2	.1
September	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.3	5.4	.1
December	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.3	5.4	.1
1990										
January	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
March	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	5.2	.2
April	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
May	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	.1
June	5.3	5.2	5.2	5.2	5.1	5.2	5.2	5.2	5.1	.1
July	5.5	5.5	5.4	5.4	5.4	5.4	5.5	5.5	5.5	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
August 1990

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States Department of Labor

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USDL 90-406

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EDT), FRIDAY, AUGUST 3, 1990

THE EMPLOYMENT SITUATION: JULY 1990

Employment declined in July and unemployment rose, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The civilian worker unemployment rate increased from June's 5.2 percent to 5.5 percent.

Nonfarm payroll employment, as measured by the survey of business establishments, fell by 220,000 in July. About 175,000 of this decline was in Federal government employment, largely among temporary workers hired to conduct the decennial census. Total civilian employment, as measured by the survey of households, fell by more than 400,000.

Unemployment (Household Survey Data)

The number of unemployed persons increased by 370,000 in July to a seasonally adjusted level of 6.8 million. The civilian worker unemployment rate rose 0.3 percentage point to 5.5 percent. Much of July's increase occurred among teenagers, although unemployment was up for other worker groups as well. (See table A-2.)

The jobless rate for 16-to-19-year-olds rose 2.2 percentage points to 16.3 percent in July, despite a relatively small influx of teens into the summer job market. The jobless rate for adult men, at 4.9 percent, was half a percentage point above a year earlier. In contrast, the rate for adult women, although up slightly in July to 4.7 percent, was in line with the rates that have generally prevailed since late 1988. The unemployment rate for whites was little changed at 4.6 percent, while the rate for blacks rose to 11.3 percent. Unemployment among Hispanics, which had fallen in June, increased to 7.9 percent of their labor force. (See tables A-2 and A-3.)

The great majority of the persons added to unemployment in July were either reentering the labor force or seeking their first jobs. There was no significant increase in the number of unemployed who had lost a job. (See table A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Following little movement from March through June, total civilian employment showed a decline of 440,000 in July to a seasonally adjusted

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			June-July change
	1990		1990			
	I	II	May	June	July	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/.....	126,300	126,550	126,643	126,466	126,394	-72
Total employment 1/.	119,758	119,927	119,989	120,019	119,580	-439
Civilian labor force..	124,619	124,908	125,004	124,836	124,767	-69
Civilian employment.	118,077	118,285	118,350	118,389	117,953	-436
Unemployment.....	6,541	6,623	6,653	6,447	6,814	367
Not in labor force....	62,793	62,916	62,824	63,141	63,369	228
Discouraged workers.	747	893	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.2	5.2	5.3	5.1	5.4	0.3
All civilian workers	5.2	5.3	5.3	5.2	5.5	.3
Adult men.....	4.6	4.8	4.7	4.7	4.9	.2
Adult women.....	4.7	4.6	4.6	4.5	4.7	.2
Teenagers.....	14.5	14.8	15.5	14.1	16.3	2.2
White.....	4.6	4.6	4.6	4.5	4.6	.1
Black.....	10.8	10.4	10.4	10.4	11.3	.9
Hispanic origin...	7.5	7.6	7.7	7.1	7.9	.8
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment....	110,221	p110,699	110,770	p110,925	p110,706	p-219
Goods-producing.....	25,603	p25,445	25,450	p25,405	p25,346	p-59
Service-producing...	84,617	p85,253	85,320	p85,520	p85,360	p-160
	Hours of work					
Average weekly hours:						
Total private.....	34.6	p34.6	34.6	p34.7	p34.7	p.0
Manufacturing.....	40.7	p40.8	40.9	p41.0	p40.9	p-0.1
Overtime.....	3.6	p3.7	3.8	p3.8	p3.7	p-.1

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

level of 118.0 million. The July employment level was only 450,000 above its level of a year earlier. The proportion of the population holding jobs declined three-tenths of a percentage point over the month to 62.7 percent. (See table A-2.)

The civilian labor force was unchanged in July at 124.8 million, seasonally adjusted. Since July 1989, the labor force has grown by only 660,000. In contrast, over the prior 5 years, July-to-July labor force growth averaged about 2 million.

The recent slowdown in labor force growth largely reflects declines in the youth population and in their labor force participation rates. The population of 16-to-24-year-olds declined by more than 600,000 over the year. Also, the proportion of these youths in the labor force, at 66.6 percent in July, was 2.3 percentage points below a year earlier and the lowest since 1983. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Total nonfarm payroll employment declined by 220,000 in July, after seasonal adjustment, to a level of 110.7 million. This large decrease stemmed mostly from the reduction of an estimated 160,000 in the number of temporary census workers, as reductions in data collection began. (See table B-1.)

Private sector employment, which has shown weakness in recent months, also edged down in July, mostly in the construction industry. Construction employment fell by 50,000, after seasonal adjustment, and has declined by more than 100,000 since last fall.

Manufacturing employment continued to trend downward in July, though at a slower pace than in recent months. July losses were essentially limited to electrical equipment and the industries that produce materials used in construction. Somewhat offsetting this were increases in fabricated metals and several of the nondurable goods industries, including textiles. The number of factory jobs has declined by 325,000 since March 1989.

In the service-producing sector, the number of government employees fell by 175,000 in July, reflecting the winding down of decennial census work. Services-industry employment was about unchanged overall in July. Within services, however, the rapidly expanding health services industry posted only a moderate gain of 25,000 workers. Retail trade added 20,000 jobs, about equal to the average monthly growth this year. Employment in wholesale trade; finance, insurance, and real estate; and transportation and public utilities was little changed in July. Growth in these four industries has been considerably less thus far this year than during most of the expansion of the 1980s.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonfarm payrolls was unchanged in July at 34.7 hours, seasonally adjusted. In manufacturing, the workweek declined by 0.1 hour to 40.9 hours, and manufacturing overtime also fell 0.1 hour to 3.7 hours. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers was about unchanged in July at 130.8 (1977=100), after seasonal adjustment. This index has been relatively flat thus far in 1990. The index for manufacturing was unchanged at 94.5, and the construction index fell 3.4 percent to 138.0. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Both average hourly and weekly earnings of production or nonsupervisory workers on private nonfarm payrolls edged up 0.6 percent in July, seasonally adjusted. Prior to seasonal adjustment, average hourly earnings increased 4 cents to $10.02, and average weekly earnings increased $2.40 to $350.70. Over the year, average hourly earnings rose 4.0 percent and average weekly earnings were up 3.8 percent. (See tables B-3 and B-4.)

Revisions in Establishment Survey Data

With the release of data for August 1990, national estimates of nonfarm payroll employment, hours, and earnings will be revised to incorporate March 1989 benchmark levels, the 1987 Standard Industrial Classification structure, and updated seasonal adjustment factors. In addition, all constant dollar and other 1977-based series will be rebased to 1982=100.

The Employment Situation for August 1990 will be released on Friday, September 7, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces.

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are calculated for 6 months, along with the introduction of new benchmarks, which are discussed at the end of the next section, and again with the release of data for October. In both surveys, revisions to data published over the previous 5 years are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through I of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted					
	July 1989	June 1990	July 1990	July 1989	Mar 1990	Apr 1990	May 1990	June 1990	July 1990
TOTAL									
Noninstitutional population[1]	188,149	189,607	189,763	188,149	189,198	189,326	189,467	189,607	189,763
Labor force[2]	127,904	127,937	128,527	125,679	126,498	126,543	126,643	126,466	126,394
Participation rate[3]	68.0	67.5	67.7	66.8	66.9	66.8	66.9	66.7	66.6
Total employed[2]	121,168	121,235	121,581	119,102	120,003	119,773	119,989	120,019	119,580
Employment-population ratio[4]	64.4	63.9	64.1	63.3	63.4	63.3	63.3	63.3	63.0
Resident Armed Forces	1,666	1,630	1,627	1,666	1,669	1,657	1,639	1,630	1,627
Civilian employed	119,502	119,605	119,954	117,436	118,334	118,116	118,350	118,389	117,953
Agriculture	3,713	3,714	3,573	3,217	3,200	3,133	3,305	3,348	3,085
Nonagricultural industries	115,789	115,891	116,381	114,219	115,133	114,983	115,045	115,041	114,867
Unemployed	6,736	6,702	6,945	6,577	6,495	6,770	6,653	6,447	6,814
Unemployment rate[5]	5.3	5.2	5.4	5.2	5.1	5.3	5.3	5.1	5.4
Not in labor force	60,245	61,670	61,237	62,470	62,700	62,783	62,824	63,141	63,369
Men, 16 years and over									
Noninstitutional population[1]	90,315	91,087	91,168	90,315	90,874	90,942	91,014	91,087	91,168
Labor force[2]	71,072	70,767	71,158	69,366	69,712	69,779	69,737	69,599	69,544
Participation rate[3]	78.7	77.7	78.1	76.8	76.7	76.7	76.6	76.4	76.3
Total employed[2]	67,764	67,174	67,509	65,939	66,208	66,043	66,058	66,000	65,740
Employment-population ratio[4]	75.0	73.7	74.0	73.0	72.9	72.6	72.6	72.5	72.1
Resident Armed Forces	1,499	1,465	1,462	1,499	1,497	1,499	1,472	1,465	1,462
Civilian employed	66,265	65,709	66,047	64,440	64,711	64,544	64,586	64,535	64,278
Unemployed	3,308	3,593	3,650	3,427	3,505	3,735	3,679	3,599	3,804
Unemployment rate[5]	4.7	5.1	5.1	4.9	5.0	5.4	5.3	5.2	5.5
Women, 16 years and over									
Noninstitutional population[1]	97,834	98,520	98,595	97,834	98,324	98,383	98,453	98,520	98,595
Labor force[2]	56,832	57,170	57,368	56,313	56,785	56,764	56,906	56,867	56,849
Participation rate[3]	58.1	58.0	58.2	57.6	57.8	57.7	57.8	57.7	57.7
Total employed[2]	53,404	54,061	54,072	53,163	53,795	53,729	53,931	54,019	53,839
Employment-population ratio[4]	54.6	54.9	54.8	54.3	54.7	54.6	54.8	54.8	54.6
Resident Armed Forces	167	165	165	167	172	158	167	165	165
Civilian employed	53,237	53,896	53,907	52,996	53,623	53,571	53,764	53,854	53,674
Unemployed	3,428	3,109	3,296	3,150	2,990	3,034	2,975	2,848	3,010
Unemployment rate[5]	6.0	5.4	5.7	5.6	5.3	5.3	5.2	5.0	5.3

[1] The population and Armed Forces figures are not adjusted for seasonal variation, therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
TOTAL									
Civilian noninstitutional population	186,483	187,977	188,136	186,483	187,529	187,669	187,828	187,977	188,136
Civilian labor force	126,236	126,307	126,900	124,013	124,829	124,886	125,004	124,836	124,767
Participation rate	67.7	67.2	67.5	66.5	66.6	66.5	66.6	66.4	66.3
Employed	119,502	119,605	119,954	117,436	118,334	118,116	118,350	118,389	117,953
Employment-population ratio[2]	64.1	63.6	63.8	63.0	63.1	62.9	63.0	63.0	62.7
Unemployed	6,736	6,702	6,945	6,577	6,495	6,770	6,653	6,447	6,814
Unemployment rate	5.3	5.3	5.5	5.3	5.2	5.4	5.3	5.2	5.5
Men, 20 years and over									
Civilian noninstitutional population	81,679	82,676	82,790	81,679	82,378	82,487	82,581	82,676	82,790
Civilian labor force	64,325	64,808	64,863	63,736	64,183	64,251	64,312	64,364	64,344
Participation rate	78.8	78.4	78.3	78.0	77.9	77.9	77.9	77.9	77.7
Employed	61,710	61,979	61,951	60,915	61,270	61,138	61,265	61,345	61,196
Employment-population ratio[2]	75.6	75.0	74.8	74.6	74.4	74.1	74.2	74.2	73.9
Agriculture	2,546	2,563	2,486	2,329	2,266	2,258	2,368	2,400	2,262
Nonagricultural industries	59,165	59,417	59,464	58,586	59,002	58,879	58,877	58,945	58,934
Unemployed	2,614	2,829	2,912	2,821	2,913	3,113	3,047	3,019	3,148
Unemployment rate	4.1	4.4	4.5	4.4	4.5	4.8	4.7	4.7	4.9
Women, 20 years and over									
Civilian noninstitutional population	90,807	91,495	91,581	90,807	91,237	91,330	91,414	91,495	91,581
Civilian labor force	52,036	52,564	52,653	52,395	52,800	52,954	53,146	53,174	53,211
Participation rate	57.4	57.6	57.7	57.8	57.9	58.0	58.1	58.1	58.1
Employed	49,326	50,491	50,210	49,817	50,344	50,427	50,709	50,776	50,719
Employment-population ratio[2]	54.4	55.2	54.8	55.0	55.2	55.2	55.5	55.5	55.4
Agriculture	743	766	676	639	648	669	680	700	585
Nonagricultural industries	48,583	49,726	49,533	49,178	49,696	49,758	50,029	50,077	50,135
Unemployed	2,712	2,393	2,644	2,588	2,456	2,526	2,438	2,398	2,492
Unemployment rate	5.2	4.5	5.0	4.9	4.7	4.8	4.6	4.5	4.7
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,196	13,806	13,764	14,196	13,914	13,852	13,832	13,806	13,764
Civilian labor force	9,875	8,614	9,183	7,892	7,846	7,681	7,545	7,298	7,212
Participation rate	69.6	62.4	66.7	55.6	56.4	55.4	54.6	52.9	52.4
Employed	8,465	7,134	7,794	6,704	6,720	6,551	6,376	6,268	6,036
Employment-population ratio[2]	59.6	51.7	56.6	47.2	48.3	47.3	46.1	45.4	43.9
Agriculture	425	386	411	249	285	206	237	249	239
Nonagricultural industries	8,041	6,748	7,383	6,455	6,435	6,345	6,139	6,019	5,799
Unemployed	1,410	1,480	1,389	1,188	1,126	1,130	1,169	1,030	1,174
Unemployment rate	14.3	17.2	15.1	15.1	14.4	14.7	15.5	14.1	16.3

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
WHITE									
Civilian noninstitutional population	159,400	160,365	160,468	159,400	160,076	160,170	160,271	160,365	160,468
Civilian labor force	108,113	108,526	108,930	106,384	107,061	107,133	107,353	107,273	107,230
Participation rate	67.8	67.7	67.9	66.7	66.9	66.9	67.0	66.9	66.8
Employed	103,215	103,638	103,914	101,546	102,206	102,027	102,362	102,461	102,280
Employment-population ratio[1]	64.8	64.6	64.8	63.7	63.8	63.7	63.9	63.9	63.7
Unemployed	4,898	4,890	5,016	4,838	4,856	5,106	4,991	4,812	4,970
Unemployment rate	4.5	4.5	4.6	4.5	4.5	4.8	4.6	4.5	4.6
Men, 20 years and over									
Civilian labor force	55,922	56,345	56,338	55,463	55,826	55,826	55,919	55,932	55,895
Participation rate	79.1	78.9	78.8	78.5	78.4	78.3	78.3	78.3	78.1
Employed	53,983	54,240	54,219	53,331	53,583	53,425	53,578	53,650	53,576
Employment-population ratio[1]	76.4	75.9	75.8	75.4	75.2	74.9	75.1	75.1	74.9
Unemployed	1,939	2,104	2,119	2,132	2,235	2,400	2,341	2,282	2,318
Unemployment rate	3.5	3.7	3.8	3.8	4.0	4.3	4.2	4.1	4.1
Women, 20 years and over									
Civilian labor force	43,869	44,821	44,751	44,230	44,523	44,740	44,925	45,055	45,120
Participation rate	56.8	57.6	57.5	57.3	57.4	57.6	57.8	57.9	57.9
Employed	41,902	43,076	42,844	42,377	42,785	42,895	43,165	43,282	43,321
Employment-population ratio[1]	54.3	55.4	55.0	54.9	55.1	55.2	55.5	55.6	55.6
Unemployed	1,967	1,745	1,907	1,853	1,758	1,844	1,760	1,763	1,799
Unemployment rate	4.5	3.9	4.3	4.2	3.9	4.1	3.9	3.9	4.0
Both sexes, 16 to 19 years									
Civilian labor force	8,322	7,362	7,841	8,691	6,710	6,568	6,509	6,286	6,216
Participation rate	72.1	66.3	70.8	58.0	59.8	58.8	58.4	56.6	56.1
Employed	7,330	6,322	6,852	5,838	5,847	5,707	5,619	5,519	5,383
Employment-population ratio[1]	63.5	56.9	61.9	50.6	52.1	51.1	50.4	49.7	48.4
Unemployed	992	1,040	989	853	863	861	890	767	863
Unemployment rate	11.9	14.1	12.6	12.7	12.9	13.1	13.7	12.2	13.7
Men	11.3	13.8	13.0	12.8	13.0	13.8	14.2	12.9	15.1
Women	12.6	14.4	12.2	12.6	12.7	12.4	13.1	11.4	12.3
BLACK									
Civilian noninstitutional population	21,038	21,289	21,318	21,038	21,211	21,226	21,261	21,289	21,318
Civilian labor force	13,978	13,852	13,799	13,548	13,581	13,570	13,597	13,472	13,379
Participation rate	66.4	64.1	64.7	64.4	64.0	63.9	63.9	63.3	62.8
Employed	12,364	12,118	12,186	12,083	12,148	12,161	12,179	12,084	11,970
Employment-population ratio[1]	58.8	56.9	57.1	57.3	57.3	57.3	57.3	56.7	56.7
Unemployed	1,614	1,534	1,631	1,485	1,433	1,408	1,408	1,407	1,510
Unemployment rate	11.5	11.2	11.8	11.0	10.6	10.4	10.4	10.4	11.3
Men, 20 years and over									
Civilian labor force	6,286	6,325	6,367	6,208	6,227	6,240	6,241	6,230	6,282
Participation rate	75.1	74.4	74.7	74.1	73.6	73.7	73.5	74.0	73.9
Employed	5,708	5,742	5,707	5,621	5,631	5,651	5,672	5,702	5,617
Employment-population ratio[1]	68.2	67.5	67.0	67.1	66.5	66.8	66.8	67.1	66.0
Unemployed	578	583	660	588	596	589	569	581	676
Unemployment rate	9.2	9.2	10.4	9.5	9.6	9.4	9.1	9.4	10.7
Women, 20 years and over									
Civilian labor force	6,400	6,320	6,342	6,386	6,456	6,451	6,516	6,377	6,328
Participation rate	61.0	59.4	59.5	60.9	60.9	60.8	61.3	59.9	59.4
Employed	5,742	5,780	5,724	5,755	5,872	5,858	5,921	5,812	5,735
Employment-population ratio[1]	54.7	54.1	53.7	54.9	55.4	55.2	55.7	54.6	53.8
Unemployed	658	540	619	631	584	594	595	565	592
Unemployment rate	10.3	8.9	9.8	9.9	9.0	9.2	9.1	8.9	9.4
Both sexes, 16 to 19 years									
Civilian labor force	1,291	1,006	1,090	953	898	879	830	802	758
Participation rate	59.4	46.9	50.8	43.8	41.7	40.8	38.6	37.4	35.4
Employed	913	616	738	687	645	652	586	550	517
Employment-population ratio[1]	42.0	28.7	34.4	31.6	30.0	30.3	27.3	25.6	24.1
Unemployed	378	390	352	266	253	227	244	252	241
Unemployment rate	29.3	38.8	32.3	27.9	28.2	25.8	29.4	31.4	31.8
Men	25.5	39.8	32.3	23.2	30.0	27.2	31.1	37.4	32.3
Women	33.6	37.7	32.3	33.1	26.2	24.3	27.6	25.3	31.2

See footnotes at end of table

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,813	14,277	14,317	13,813	14,159	14,198	14,238	14,277	14,317
Civilian labor force	9,558	9,785	9,830	9,403	9,565	9,618	9,669	9,651	9,685
Participation rate	69.2	68.4	68.7	68.1	67.6	67.7	67.9	67.6	67.5
Employed	8,707	9,086	9,032	8,579	8,831	8,850	8,927	8,967	8,899
Employment-population ratio[2]	63.0	63.5	63.1	62.1	62.4	62.3	62.7	62.8	62.2
Unemployed	851	699	798	824	734	768	742	684	787
Unemployment rate	8.9	7.2	8.1	8.8	7.7	8.0	7.7	7.1	7.9

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	119,502	119,605	119,954	117,436	118,334	118,118	118,350	118,389	117,953
Married men, spouse present	41,253	40,757	40,707	41,067	40,989	40,730	40,881	40,554	40,545
Married women, spouse present	28,861	29,587	29,311	29,520	29,618	29,742	30,046	29,856	29,909
Women who maintain families	6,404	6,383	6,354	6,446	6,291	6,325	6,400	6,467	6,380
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture	1,982	1,983	1,934	1,885	1,620	1,621	1,728	1,885	1,828
Wage and salary workers	1,556	1,605	1,508	1,424	1,457	1,429	1,502	1,507	1,377
Self-employed workers	175	146	132	127	115	112	101	108	96
Unpaid family workers									
Nonagricultural industries	106,868	106,862	107,336	105,353	106,029	105,938	106,176	105,985	105,885
Wage and salary workers	16,888	17,399	17,183	17,501	17,724	17,816	18,113	17,863	17,786
Government	89,981	89,463	90,155	87,852	88,306	88,122	88,063	88,121	88,097
Private industries	1,207	1,143	1,093	1,094	1,003	957	941	1,056	989
Private households	88,774	88,320	89,062	86,758	87,302	87,165	87,122	87,065	87,108
Other industries	8,675	8,794	8,779	8,802	8,852	8,716	8,783	8,759	8,709
Self-employed workers	245	235	264	248	261	258	254	226	299
Unpaid family workers									
PERSONS AT WORK PART TIME									
All industries	5,500	5,519	5,610	4,773	5,004	4,871	4,831	5,013	4,870
Part time for economic reasons	2,299	2,402	2,573	2,301	2,476	2,407	2,439	2,499	2,565
Slack work	2,788	2,669	2,666	2,172	2,127	2,138	2,052	2,224	2,070
Could only find part-time work	12,882	13,431	12,862	15,577	15,464	15,193	15,592	15,125	15,311
Voluntary part time									
Nonagricultural industries	5,199	5,207	5,355	4,583	4,747	4,630	4,666	4,734	4,710
Part time for economic reasons	2,161	2,204	2,413	2,164	2,293	2,218	2,317	2,264	2,406
Slack work	2,647	2,565	2,583	2,104	2,050	2,096	2,004	2,141	2,048
Could only find part-time work	12,419	12,886	12,236	15,138	14,975	14,804	15,064	14,627	14,922
Voluntary part time									

Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

HOUSEHOLD DATA

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989			1990		1990		
	II	III	IV	I	II	May	June	July
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2
U-2 Job losers as a percent of the civilian labor force	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.5
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.0	4.1	4.2	4.1	4.1	4.1	4.3
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	4.9	5.0	5.0	4.9	5.0	4.9	4.8	5.0
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.2	5.3	5.2	5.2	5.3	5.1	5.4
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.3	5.3	5.2	5.3	5.3	5.2	5.5
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.3	7.2	7.2	7.2	7.3	7.2	7.2	7.4
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	8.0	7.9	7.9	7.8	8.0	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	July 1989	June 1990	July 1990	July 1989	Mar 1990	Apr 1990	May 1990	June 1990	July 1990
CHARACTERISTIC									
Total, 16 years and over	6,577	6,447	6,814	5.3	5.2	5.4	5.3	5.2	5.5
Men, 16 years and over	3,427	3,599	3,804	5.0	5.1	5.5	5.4	5.3	5.6
Men, 20 years and over	2,821	3,019	3,148	4.4	4.5	4.8	4.7	4.7	4.9
Women, 16 years and over	3,150	2,848	3,010	5.6	5.3	5.4	5.2	5.0	5.3
Women, 20 years and over	2,568	2,398	2,492	4.9	4.7	4.8	4.6	4.5	4.7
Both sexes, 16 to 19 years	1,188	1,030	1,174	15.1	14.4	14.7	15.5	14.1	16.3
Married men, spouse present	1,250	1,323	1,393	3.0	3.2	3.3	3.3	3.2	3.3
Married women, spouse present	1,166	1,136	1,085	3.8	3.6	3.5	3.5	3.7	3.5
Women who maintain families	596	562	594	8.5	8.4	7.5	7.4	8.0	8.5
Full-time workers	5,251	5,120	5,349	5.0	4.9	5.1	4.9	4.8	5.0
Part-time workers	1,324	1,357	1,493	7.2	7.2	7.1	7.4	7.6	8.1
Labor force time lost[2]	--	--	--	6.0	5.9	6.2	6.0	5.9	6.0
INDUSTRY									
Nonagricultural private wage and salary workers	4,999	4,913	5,111	5.4	5.5	5.7	5.5	5.3	5.5
Goods-producing industries	1,823	1,704	1,916	6.2	6.6	6.9	6.7	5.9	6.6
Mining	42	26	30	5.8	5.9	4.6	3.3	3.6	4.4
Construction	657	607	652	10.3	10.0	10.6	11.5	9.7	10.2
Manufacturing	1,124	1,070	1,236	5.1	5.5	5.9	5.4	4.9	5.7
Durable goods	617	629	723	4.7	5.3	5.7	5.5	4.9	5.6
Nondurable goods	507	441	512	5.6	5.9	6.3	5.2	5.0	5.7
Service-producing industries	3,176	3,209	3,193	5.0	5.0	5.1	5.0	5.0	5.0
Transportation and public utilities	267	194	234	4.1	3.4	4.3	3.2	3.0	3.7
Wholesale and retail trade	1,441	1,441	1,425	6.1	6.2	6.2	6.3	6.2	6.0
Finance and service industries	1,468	1,574	1,534	4.4	4.5	4.5	4.4	4.5	4.5
Government workers	505	530	511	2.8	2.3	2.1	2.5	2.4	2.5
Agricultural wage and salary workers	164	186	192	8.9	10.1	11.0	7.4	10.0	10.4

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor hours.

HOUSEHOLD DATA

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	July 1989	June 1990	July 1990	July 1989	Mar 1990	Apr 1990	May 1990	June 1990	July 1990
DURATION									
Less than 5 weeks	3,338	3,631	3,292	3,156	3,194	3,204	3,026	3,046	3,120
5 to 14 weeks	2,070	1,731	2,269	1,965	2,044	2,175	2,236	2,049	2,159
15 weeks and over	1,328	1,340	1,384	1,461	1,333	1,386	1,374	1,406	1,513
15 to 26 weeks	712	712	695	838	702	697	764	761	809
27 weeks and over	616	628	689	623	631	688	610	643	704
Average (mean) duration, in weeks	11.2	11.2	11.4	11.9	12.0	12.1	11.6	12.0	12.0
Median duration, in weeks	5.1	4.2	4.9	5.4	5.1	5.0	5.4	5.1	5.2
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	49.5	54.2	47.4	47.9	48.6	47.4	45.6	46.9	45.9
5 to 14 weeks	30.7	25.8	32.7	29.9	31.1	32.2	33.7	31.5	31.8
15 weeks and over	19.7	20.0	19.9	22.2	20.3	20.5	20.7	21.6	22.3
15 to 26 weeks	10.6	10.6	10.0	12.7	10.7	10.3	11.5	11.7	11.9
27 weeks and over	9.1	9.4	9.9	9.5	9.6	10.2	9.2	9.9	10.4

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	July 1989	June 1990	July 1990	July 1989	Mar 1990	Apr 1990	May 1990	June 1990	July 1990
NUMBER OF UNEMPLOYED									
Job losers	2,797	2,855	2,968	2,916	3,038	3,147	3,171	3,151	3,088
On layoff	755	766	864	829	941	999	979	918	960
Other job losers	2,042	2,089	2,104	2,087	2,097	2,148	2,192	2,233	2,128
Job leavers	1,064	823	1,071	1,016	1,014	1,179	1,014	995	1,027
Reentrants	1,946	1,977	2,013	1,901	1,859	1,780	1,820	1,789	1,960
New entrants	930	946	893	723	644	617	683	534	687
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	41.5	42.6	42.7	44.5	46.3	46.8	47.4	48.7	45.7
On layoff	11.2	11.4	12.4	12.6	14.4	14.9	14.6	14.2	14.2
Other job losers	30.3	31.2	30.3	31.8	32.0	31.9	32.8	34.5	31.5
Job leavers	15.8	13.8	15.4	15.5	15.5	17.5	15.2	15.4	15.2
Reentrants	28.9	29.5	29.0	29.0	28.4	26.5	27.2	27.7	29.1
New entrants	13.8	14.1	12.9	11.0	9.8	9.2	10.2	8.3	10.2
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.2	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.5
Job leavers	.8	.7	.8	.8	.8	.9	.8	.8	.8
Reentrants	1.5	1.6	1.6	1.5	1.5	1.4	1.5	1.4	1.5
New entrants	.7	.7	.7	.6	.5	.5	.5	.4	.5

HOUSEHOLD DATA

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
Total, 16 years and over	6,577	6,447	6,814	5.3	5.2	5.4	5.3	5.2	5.5
16 to 24 years	2,419	2,171	2,316	10.8	10.5	11.2	11.0	10.3	11.0
16 to 19 years	1,188	1,030	1,174	15.1	14.4	14.7	15.5	14.1	16.3
16 to 17 years	530	442	457	17.7	16.9	17.4	20.0	16.1	17.4
18 to 19 years	638	612	693	13.1	12.9	13.0	12.8	13.4	15.2
20 to 24 years	1,231	1,141	1,142	8.6	8.3	9.3	8.5	8.2	8.3
25 years and over	4,108	4,288	4,456	4.0	4.1	4.2	4.1	4.1	4.3
25 to 54 years	3,629	3,850	3,958	4.2	4.3	4.4	4.3	4.4	4.5
55 years and over	480	433	494	3.1	3.3	3.3	3.0	2.8	3.2
Men, 16 years and over	3,427	3,599	3,804	5.0	5.1	5.5	5.4	5.3	5.6
16 to 24 years	1,263	1,233	1,279	10.9	10.9	11.8	11.2	11.1	11.6
16 to 19 years	606	580	658	14.7	14.7	15.4	16.0	15.4	17.5
16 to 17 years	279	228	249	17.8	16.9	18.1	20.6	16.4	18.4
18 to 19 years	309	350	387	12.1	13.6	13.8	13.4	14.8	16.3
20 to 24 years	657	653	623	8.9	8.8	9.8	8.6	8.9	8.5
25 years and over	2,132	2,343	2,469	3.8	4.0	4.2	4.1	4.1	4.4
25 to 54 years	1,858	2,086	2,173	3.9	4.2	4.4	4.3	4.3	4.5
55 years and over	278	275	321	3.1	3.4	3.5	3.4	3.1	3.6
Women, 16 years and over	3,150	2,848	3,010	5.6	5.3	5.4	5.2	5.0	5.3
16 to 24 years	1,156	938	1,037	10.9	10.0	10.5	10.7	9.3	10.4
16 to 19 years	582	450	516	15.5	14.0	13.9	14.9	12.8	14.9
16 to 17 years	251	214	208	17.6	16.9	16.7	19.4	15.9	16.4
18 to 19 years	329	262	308	14.2	12.0	12.1	12.2	11.9	13.9
20 to 24 years	574	488	519	8.3	7.7	8.7	8.4	7.5	8.0
25 years and over	1,974	1,923	1,958	4.3	4.2	4.2	4.1	4.1	4.2
25 to 54 years	1,771	1,765	1,785	4.5	4.4	4.4	4.4	4.4	4.4
55 years and over	202	158	173	3.1	3.3	2.9	2.5	2.4	2.6

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
Civilian noninstitutional population	27,082	27,812	27,988	27,082	27,453	27,499	27,556	27,812	27,988
Civilian labor force	16,125	17,774	17,970	17,582	17,727	17,867	17,860	17,540	17,448
Participation rate	66.9	64.4	64.9	65.0	64.6	64.3	64.1	63.5	63.1
Employed	16,287	15,967	16,040	15,895	16,061	16,075	16,021	15,883	15,655
Employment-population ratio[2]	60.1	57.8	58.0	58.7	58.5	58.5	58.1	57.5	56.6
Unemployed	1,838	1,811	1,929	1,687	1,667	1,813	1,840	1,657	1,793
Unemployment rate	10.1	10.2	10.7	9.6	9.4	9.1	9.3	9.4	10.3
Not in labor force	8,957	9,834	9,998	9,490	9,726	9,812	9,896	10,072	10,220

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	July 1989	July 1990	July 1989	July 1990	July 1989	July 1990
Total, 16 years and over	119,502	119,954	6,746	6,945	5.3	5.5
Managerial and professional specialty	30,066	30,466	666	735	2.2	2.4
Executive, administrative, and managerial	15,163	15,097	336	345	2.2	2.2
Professional specialty	14,906	15,369	330	390	2.2	2.5
Technical, sales, and administrative support	36,552	36,756	1,556	1,599	4.1	4.2
Technicians and related support	3,797	3,894	79	118	2.0	2.9
Sales occupations	14,181	14,406	659	663	4.4	4.4
Administrative support, including clerical	18,574	18,457	818	817	4.2	4.2
Service occupations	16,195	16,400	1,135	1,136	6.5	6.5
Private household	942	831	59	50	5.9	5.6
Protective service	2,013	2,110	76	63	3.6	2.9
Service, except private household and protective	13,239	13,459	1,001	1,023	7.0	7.1
Precision production, craft, and repair	14,059	14,096	583	727	4.0	4.9
Mechanics and repairers	4,452	4,609	108	173	2.4	3.6
Construction trades	5,300	5,306	347	369	5.9	6.5
Other precision production, craft, and repair	4,108	4,181	128	186	3.0	4.3
Operators, fabricators, and laborers	18,488	18,180	1,620	1,487	8.1	7.6
Machine operators, assemblers, and inspectors	8,266	8,262	704	638	7.8	7.2
Transportation and material moving occupations	5,028	4,828	320	303	6.0	5.9
Handlers, equipment cleaners, helpers, and laborers	5,194	5,090	597	546	10.3	9.7
Construction laborers	866	912	147	115	14.5	11.2
Other handlers, equipment cleaners, helpers, and laborers	4,328	4,178	450	432	9.4	9.4
Farming, forestry, and fishing	4,139	4,057	203	241	4.7	5.6

Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian nonnstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	July 1989	July 1990	July 1989	July 1990	July 1989	July 1990	July 1989	July 1990	July 1989	July 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,455	7,646	6,809	6,920	6,570	6,680	239	241	3.5	3.5
35 to 49 years	6,477	6,518	6,156	6,123	5,936	5,908	221	215	3.6	3.5
35 to 39 years	1,731	1,403	1,521	1,305	1,551	1,246	70	59	4.3	4.5
40 to 44 years	3,266	3,300	3,164	3,130	3,065	3,023	99	107	3.1	3.4
45 to 49 years	1,460	1,815	1,373	1,688	1,321	1,639	52	49	3.8	2.9
50 years and over	978	1,128	651	798	634	772	18	26	2.8	3.2
NONVETERANS										
Total, 35 to 49 years	16,220	17,290	15,167	16,188	14,684	15,590	483	598	3.2	3.7
35 to 39 years	7,451	7,972	7,065	7,581	6,841	7,320	224	262	3.2	3.5
40 to 44 years	4,677	5,103	4,358	4,752	4,208	4,564	150	188	3.4	4.0
45 to 49 years	4,093	4,215	3,743	3,855	3,635	3,707	108	148	2.9	3.8

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	July 1989	June 1990	July 1990	July 1989	Mar 1990	Apr 1990	May 1990	June 1990	July 1990
California									
Civilian noninstitutional population	21,478	21,918	21,961	21,478	21,794	21,834	21,877	21,918	21,961
Civilian labor force	14,820	14,853	14,965	14,623	14,613	14,677	14,801	14,801	14,751
Employed	13,958	14,110	14,115	13,857	13,847	13,881	13,998	14,073	13,995
Unemployed	862	743	850	766	766	796	803	728	756
Unemployment rate	5.8	5.0	5.7	5.2	5.2	5.4	5.4	4.9	5.1
Florida									
Civilian noninstitutional population	9,900	10,111	10,132	9,900	10,052	10,071	10,091	10,111	10,132
Civilian labor force	6,344	6,362	6,425	6,228	6,351	6,336	6,282	6,294	6,313
Employed	5,961	5,942	6,030	5,877	6,021	5,972	5,931	5,886	5,953
Unemployed	383	420	395	351	330	364	351	408	360
Unemployment rate	6.0	6.6	6.1	5.6	5.2	5.7	5.6	6.5	5.7
Illinois									
Civilian noninstitutional population	8,834	8,871	8,876	8,834	8,859	8,863	8,867	8,871	8,876
Civilian labor force	6,061	6,059	6,174	5,976	6,001	6,091	5,987	5,966	6,102
Employed	5,736	5,689	5,786	5,630	5,671	5,722	5,670	5,625	5,691
Unemployed	324	370	387	346	330	369	317	361	411
Unemployment rate	5.4	6.1	6.3	5.8	5.5	6.1	5.3	6.0	6.7
Massachusetts									
Civilian noninstitutional population	4,618	4,620	4,620	4,618	4,618	4,619	4,619	4,620	4,620
Civilian labor force	3,257	3,233	3,224	3,188	3,178	3,161	3,203	3,172	3,157
Employed	3,106	3,044	3,014	3,050	3,006	2,988	3,028	2,987	2,963
Unemployed	151	189	209	138	172	173	175	185	194
Unemployment rate	4.6	5.8	6.5	4.3	5.4	5.5	5.5	5.8	6.1
Michigan									
Civilian noninstitutional population	6,985	6,999	7,001	6,985	6,994	6,995	6,997	6,999	7,001
Civilian labor force	4,646	4,664	4,686	4,572	4,553	4,511	4,591	4,631	4,614
Employed	4,306	4,315	4,326	4,254	4,226	4,180	4,238	4,294	4,271
Unemployed	340	349	363	318	327	331	353	337	343
Unemployment rate	7.3	7.5	7.7	7.0	7.2	7.3	7.7	7.3	7.4
New Jersey									
Civilian noninstitutional population	6,032	6,028	6,028	6,032	6,028	6,028	6,028	6,028	6,028
Civilian labor force	4,026	4,083	4,134	3,964	4,034	4,002	4,012	4,037	4,073
Employed	3,843	3,892	3,922	3,799	3,844	3,805	3,820	3,845	3,879
Unemployed	183	191	212	165	190	197	192	192	194
Unemployment rate	4.5	4.7	5.1	4.2	4.7	4.9	4.8	4.8	4.8
New York									
Civilian noninstitutional population	13,804	13,801	13,802	13,804	13,799	13,799	13,800	13,801	13,802
Civilian labor force	8,867	8,808	8,874	8,659	8,660	8,709	8,775	8,732	8,686
Employed	8,445	8,395	8,415	8,250	8,223	8,286	8,328	8,287	8,222
Unemployed	411	413	459	419	437	423	447	445	464
Unemployment rate	4.6	4.7	5.2	4.8	5.0	4.9	5.1	5.1	5.3
North Carolina									
Civilian noninstitutional population	4,940	4,996	5,002	4,940	4,980	4,985	4,991	4,996	5,002
Civilian labor force	3,471	3,471	3,494	3,388	3,399	3,410	3,451	3,438	3,410
Employed	3,357	3,339	3,336	3,274	3,283	3,281	3,312	3,312	3,252
Unemployed	114	132	157	114	116	129	139	126	158
Unemployment rate	3.3	3.8	4.5	3.4	3.4	3.8	4.0	3.7	4.6
Ohio									
Civilian noninstitutional population	8,262	8,283	8,286	8,262	8,276	8,278	8,281	8,283	8,286
Civilian labor force	5,483	5,481	5,472	5,420	5,402	5,417	5,428	5,419	5,411
Employed	5,210	5,179	5,194	5,124	5,107	5,098	5,107	5,135	5,104
Unemployed	273	301	278	296	295	319	321	284	307
Unemployment rate	5.0	5.5	5.1	5.5	5.5	5.9	5.9	5.2	5.7

See footnotes at end of table

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	July 1989	June 1990	July 1990	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990	July 1990
Pennsylvania									
Civilian noninstitutional population[2]	9,367	9,387	9,390	9,367	9,380	9,382	9,385	9,387	9,390
Civilian labor force	5,921	5,974	5,974	5,803	6,004	5,945	5,941	5,894	5,869
Employed	5,644	5,678	5,664	5,544	5,694	5,604	5,648	5,623	5,574
Unemployed	277	296	310	259	310	341	293	271	295
Unemployment rate	4.7	5.0	5.2	4.5	5.2	5.7	4.9	4.6	5.0
Texas									
Civilian noninstitutional population[2]	12,222	12,365	12,379	12,222	12,323	12,337	12,351	12,365	12,379
Civilian labor force	8,583	8,549	8,528	8,406	8,447	8,495	8,425	8,452	8,371
Employed	7,967	8,010	7,990	7,821	7,977	7,955	7,880	7,979	7,853
Unemployed	616	539	538	585	470	540	545	473	518
Unemployment rate	7.2	6.3	6.3	7.0	5.6	6.4	6.5	5.6	6.2

[1] These are the official Bureau of Labor Statistics estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

36-591 0 - 91 - 3

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	July 1989	May 1990	June 1990p/	July 1990p/	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990p/	July 1990p/
Total	108,540	111,232	111,897	110,513	108,767	110,427	110,401	110,770	110,925	110,706
Total private	91,733	92,402	93,314	93,139	91,016	92,313	92,187	92,296	92,414	92,369
Goods-producing industries	25,984	25,447	25,729	25,599	25,669	25,606	25,481	25,450	25,405	25,346
Mining	716	756	768	771	706	751	755	758	764	765
Oil and gas extraction	406.4	421.7	429.1	433.0	404	423	424	426	430	430
Construction	5,622	5,351	5,487	5,539	5,514	5,432	5,523	5,309	5,281	5,250
General building contractors	1,463.8	1,374.5	1,413.5	1,422.7	1,391	1,416	1,378	1,379	1,368	1,352
Manufacturing	19,368	19,368	19,474	19,289	19,649	19,423	19,403	19,383	19,360	19,355
Production workers	13,296	13,129	13,237	13,068	13,410	13,191	13,192	13,164	13,152	13,159
Durable goods	11,490	11,344	11,394	11,258	11,569	11,385	11,350	11,341	11,325	11,313
Production workers	7,618	7,538	7,580	7,457	7,697	7,559	7,545	7,529	7,525	7,528
Lumber and wood products	786.5	759.0	772.7	772.6	767	766	763	761	756	754
Furniture and fixtures	523.6	518.6	520.3	509.8	536	523	520	521	521	520
Stone, clay, and glass products	612.5	597.6	605.3	596.7	602	599	594	592	591	587
Primary metal industries	776.0	766.8	771.3	759.0	785	765	766	767	767	767
Blast furnaces and basic steel products	277.5	267.3	268.7	267.0	277	267	268	268	267	265
Fabricated metal products	1,430.5	1,420.2	1,425.7	1,407.6	1,446	1,428	1,424	1,422	1,417	1,422
Machinery, except electrical	2,145.1	2,127.3	2,127.8	2,105.7	2,154	2,133	2,124	2,123	2,117	2,114
Electrical and electronic equipment	2,027.6	1,969.2	1,974.7	1,955.1	2,040	1,990	1,981	1,979	1,975	1,965
Transportation equipment	2,023.3	2,023.1	2,030.5	1,999.7	2,046	2,022	2,014	2,011	2,020	2,024
Motor vehicles and equipment	828.5	828.7	835.3	811.1	844	824	821	818	825	832
Instruments and related products	781.4	772.1	776.5	773.8	781	775	774	774	772	775
Miscellaneous manufacturing	383.4	390.2	391.4	380.3	392	392	389	391	389	389
Nondurable goods	8,078	7,996	8,080	8,031	8,100	8,038	8,053	8,042	8,037	8,040
Production workers	5,678	5,591	5,657	5,611	5,713	5,632	5,647	5,635	5,627	5,631
Food and kindred products	1,711.2	1,632.6	1,671.1	1,700.5	1,678	1,669	1,676	1,676	1,668	1,661
Tobacco manufactures	49.5	46.3	46.2	47.0	53	50	49	50	49	50
Textile mill products	717.3	706.4	709.4	698.2	730	711	712	706	705	709
Apparel and other textile products	1,061.3	1,055.0	1,057.1	1,016.7	1,094	1,054	1,055	1,050	1,048	1,048
Paper and allied products	702.6	696.9	704.7	701.9	701	697	698	697	698	698
Printing and publishing	1,605.4	1,628.7	1,634.9	1,627.9	1,609	1,626	1,628	1,630	1,632	1,631
Chemicals and allied products	1,099.0	1,106.4	1,117.1	1,116.7	1,091	1,106	1,106	1,108	1,108	1,110
Petroleum and coal products	166.0	166.1	169.5	170.0	163	165	165	165	166	166
Rubber and misc. plastics products	831.2	827.7	835.5	825.1	841	826	829	826	830	832
Leather and leather products	134.1	133.7	134.6	128.6	140	136	134	134	133	134
Service-producing industries	82,636	85,785	86,168	84,914	83,098	84,821	84,920	85,320	85,520	85,360
Transportation and public utilities	5,737	5,897	5,944	5,914	5,736	5,875	5,875	5,895	5,905	5,910
Transportation	3,503	3,683	3,713	3,678	3,524	3,660	3,657	3,679	3,687	3,696
Communication and public utilities	2,234	2,214	2,231	2,236	2,212	2,215	2,218	2,216	2,218	2,214
Wholesale trade	6,279	6,366	6,398	6,392	6,257	6,342	6,355	6,349	6,361	6,355
Durable goods	3,722	3,758	3,783	3,781	3,700	3,762	3,756	3,758	3,764	3,762
Nondurable goods	2,557	2,588	2,615	2,611	2,537	2,580	2,579	2,591	2,597	2,593
Retail trade	19,684	19,829	20,003	19,944	19,586	19,785	19,812	19,829	19,825	19,845
General merchandise stores	2,425.2	2,374.7	2,389.5	2,387.1	2,482	2,452	2,450	2,446	2,446	2,446
Food stores	3,290.2	3,363.7	3,402.6	3,411.5	3,274	3,363	3,378	3,384	3,392	3,398
Automotive dealers and service stations	2,182.6	2,182.6	2,197.2	2,202.1	2,155	2,174	2,173	2,178	2,178	2,176
Eating and drinking places	6,555.4	6,619.9	6,730.0	6,692.2	6,570	6,480	6,494	6,503	6,515	6,529
Finance, insurance, and real estate	6,913	6,932	7,006	7,039	6,815	6,922	6,921	6,933	6,936	6,942
Finance	3,557	3,563	3,591	3,598	3,524	3,561	3,569	3,570	3,571	3,568
Insurance	2,162	2,166	2,178	2,184	2,151	2,162	2,161	2,166	2,171	2,175
Real estate	1,414	1,403	1,457	1,457	1,360	1,399	1,391	1,397	1,394	1,401
Services	27,216	27,951	28,234	28,251	26,973	27,783	27,763	27,840	27,982	27,971
Business services	5,826.5	5,909.1	5,961.6	5,954.6	5,786	5,902	5,889	5,921	5,926	5,914
Health services	7,685.8	8,119.5	8,220.6	8,254.1	7,648	8,033	8,074	8,136	8,188	8,213
Government	16,807	18,830	18,583	17,374	17,751	18,114	18,214	18,474	18,511	18,337
Federal	3,033	3,354	3,370	3,204	3,000	3,088	3,155	3,345	3,339	3,166
State	3,921	4,283	4,122	4,006	4,145	4,205	4,207	4,220	4,245	4,230
Local	9,853	11,193	11,091	10,164	10,606	10,821	10,852	10,909	10,927	10,941

p = preliminary

Note on temporary census workers

The number of temporary workers associated with the 1990 census has an impact on the employment levels for the Federal government, as well as for higher aggregates. The estimate of these workers was 22,000 in January, 27,000 in February, 117,000 in March, 178,000 in April, 378,000 in May, and 367,000 in June. For July, the estimated number (preliminary) was 205,000, which may be subject to significant revision.

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	July 1989	May 1990	June 1990p/	July 1990p/	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990p/	July 1990p/
Total private	35.1	34.5	34.9	35.0	34.8	34.6	34.6	34.6	34.7	34.7
Mining	42.5	43.4	44.6	43.6	(2)	(2)	(2)	(2)	(2)	(2)
Construction	38.9	38.2	39.0	38.4	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.5	40.8	41.1	40.5	41.0	40.8	40.6	40.9	41.0	40.9
Overtime hours	3.7	3.6	3.8	3.6	3.9	3.6	3.5	3.8	3.8	3.7
Durable goods	40.9	41.5	41.7	40.9	41.5	41.4	41.2	41.6	41.6	41.5
Overtime hours	3.7	3.8	3.9	3.6	4.0	3.7	3.5	4.0	3.9	3.8
Lumber and wood products	39.5	40.6	40.8	39.8	39.6	40.3	40.2	40.4	40.5	40.0
Furniture and fixtures	38.8	38.9	39.5	38.8	39.5	39.2	38.9	39.4	39.4	39.5
Stone, clay, and glass products	42.5	42.5	42.8	42.1	42.3	41.9	41.7	42.2	42.5	41.9
Primary metal industries	42.6	42.9	43.2	42.7	43.0	42.6	41.8	43.0	43.1	43.1
Blast furnaces and basic steel products	43.2	43.7	43.8	44.2	43.2	43.2	43.2	43.7	43.4	44.3
Fabricated metal products	40.7	41.6	41.8	41.1	41.5	41.7	41.3	41.7	41.6	41.9
Machinery, except electrical	41.9	41.9	42.1	41.5	42.4	42.0	41.7	42.1	42.0	42.0
Electrical and electronic equipment	40.0	40.5	40.8	40.0	40.6	41.1	40.8	40.8	40.8	40.7
Transportation equipment	41.6	42.8	42.9	41.9	42.6	42.2	42.2	42.6	42.8	42.8
Motor vehicles and equipment	41.4	43.8	44.0	42.6	42.6	42.2	41.5	43.5	43.9	44.0
Instruments and related products	40.8	41.0	41.3	40.7	41.4	41.1	41.5	41.5	41.5	41.2
Miscellaneous manufacturing	38.6	39.2	39.3	38.4	39.3	39.4	39.2	39.5	39.5	39.1
Nondurable goods	40.0	39.9	40.2	39.9	40.2	40.0	39.9	40.1	40.2	40.1
Overtime hours	3.7	3.6	3.6	3.6	3.8	3.5	3.5	3.6	3.7	3.6
Food and kindred products	40.9	40.6	40.8	40.7	41.0	40.6	40.6	40.8	40.8	40.6
Tobacco manufactures	37.9	39.1	39.9	39.9	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.6	40.3	40.8	39.8	41.2	40.1	40.1	40.5	40.6	40.5
Apparel and other textile products	36.7	36.4	36.9	36.7	37.0	36.2	36.4	36.5	36.6	37.0
Paper and allied products	42.9	43.1	43.5	42.9	43.2	43.2	43.5	43.3	43.4	43.2
Printing and publishing	37.4	37.5	37.5	37.4	37.6	37.4	37.6	37.8	37.9	37.7
Chemicals and allied products	42.2	42.4	42.6	42.2	42.5	42.5	42.5	42.6	42.6	42.5
Petroleum and coal products	44.5	43.8	46.8	46.4	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	40.8	41.4	41.6	40.9	41.4	41.5	40.9	41.5	41.5	41.5
Leather and leather products	37.8	37.5	38.1	37.2	37.7	37.8	37.5	37.3	37.4	37.2
Transportation and public utilities	39.8	39.1	39.7	39.8	39.4	39.3	39.5	39.2	39.5	39.4
Wholesale trade	38.5	38.0	38.5	38.4	38.1	38.1	38.2	38.1	38.2	38.2
Retail trade	29.9	28.8	29.5	29.9	29.2	28.9	29.0	28.9	29.0	29.2
Finance, insurance, and real estate	36.3	35.6	35.8	36.3	(2)	(2)	(2)	(2)	(2)	(2)
Services	33.1	32.4	32.7	33.1	32.8	32.7	32.7	32.6	32.6	32.7

1/ Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p/ = preliminary.

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	July 1989	May 1990	June 1990p/	July 1990p/	July 1989	May 1990	June 1990p/	July 1990p/
Total private	$9.63	$9.97	$9.98	$10.02	$338.01	$343.97	$348.30	$350.70
Seasonally adjusted	9.69	9.98	10.03	10.09	337.21	345.51	348.04	350.12
Mining	12.95	13.43	13.49	13.55	550.38	582.86	601.65	590.78
Construction	13.55	13.51	13.48	13.56	518.54	516.08	525.72	520.70
Manufacturing	10.47	10.80	10.84	10.88	424.04	440.64	445.52	440.64
Durable goods	10.99	11.32	11.36	11.37	449.49	469.78	473.71	465.05
Lumber and wood products	8.92	9.15	9.12	9.20	352.34	370.68	372.10	366.16
Furniture and fixtures	8.26	8.46	8.48	8.48	320.49	328.32	333.66	329.02
Stone, clay, and glass products	10.75	11.05	11.07	11.10	456.88	469.63	473.80	467.31
Primary metal industries	12.40	12.78	12.87	12.99	528.24	548.26	555.98	556.67
Blast furnaces and basic steel products	16.35	16.72	16.76	16.99	619.06	643.26	646.49	662.56
Fabricated metal products	10.55	10.76	10.80	10.81	428.57	447.62	451.44	446.29
Machinery, except electrical	11.55	11.62	11.67	11.73	475.57	486.88	491.51	486.80
Electrical and electronic equipment	10.41	10.64	10.71	10.78	416.40	430.92	436.97	431.20
Transportation equipment	13.61	14.16	14.24	14.07	566.18	606.05	610.90	589.53
Motor vehicles and equipment	14.07	14.78	14.90	14.58	582.50	647.36	655.60	621.11
Instruments and related products	10.31	10.61	10.64	10.73	420.65	435.01	439.43	436.71
Miscellaneous manufacturing	8.29	8.61	8.64	8.69	319.99	337.51	339.55	335.70
Nondurable goods	9.77	10.09	10.11	10.19	390.80	402.59	406.42	406.58
Food and kindred products	9.35	9.58	9.62	9.64	382.42	388.95	392.50	392.35
Tobacco manufactures	16.34	17.22	17.21	17.72	619.29	673.30	686.68	707.03
Textile mill products	7.66	7.99	8.02	8.01	311.00	322.80	327.22	318.80
Apparel and other textile products	6.28	6.60	6.63	6.58	230.48	240.24	244.65	241.49
Paper and allied products	12.04	12.26	12.22	12.25	516.52	528.41	529.15	529.82
Printing and publishing	10.83	11.15	11.15	11.22	405.04	418.13	418.13	419.65
Chemicals and allied products	13.12	13.43	13.47	13.56	555.66	569.43	571.82	572.25
Petroleum and coal products	15.54	16.19	16.56	16.67	679.56	709.12	765.65	773.49
Rubber and misc. plastics products	9.45	9.79	9.72	9.85	385.56	401.58	404.35	402.05
Leather and leather products	6.54	6.92	6.91	6.79	247.21	259.50	263.27	252.59
Transportation and public utilities	12.58	12.84	12.87	13.00	500.68	502.04	510.96	517.40
Wholesale trade	10.40	10.71	10.71	10.81	398.52	406.98	410.19	415.10
Retail trade	6.49	6.77	6.78	6.78	194.95	194.98	198.65	202.72
Finance, insurance, and real estate	9.59	9.92	9.92	10.05	348.12	355.15	355.14	364.09
Services	9.55	9.77	9.74	9.81	308.82	316.55	318.50	324.71

1/ See footnote 1, table B-2

p = preliminary

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry, seasonally adjusted

Industry	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990p/	July 1990p/	Percent change from: June 1990-July 1990
Total private2/:							
Current dollars	$9.69	$9.92	$9.95	$9.98	$10.03	$10.09	0.6
Constant (1977) dollars3/	4.79	4.75	4.76	4.77	4.76	N.A.	(4)
Construction	13.42	13.47	13.40	13.55	13.58	13.63	4
Manufacturing	10.48	10.73	10.75	10.81	10.85	10.89	4
Excluding overtime5/	10.01	10.26	10.26	10.35	10.37	10.41	4
Transportation and public utilities	12.61	12.86	12.88	12.89	12.95	13.02	6
Wholesale trade	10.44	10.65	10.76	10.72	10.74	10.82	7
Retail trade	6.54	6.75	6.76	6.76	6.81	6.85	3
Finance, insurance, and real estate	9.68	9.82	9.91	9.90	9.99	10.10	1.1
Services	9.46	9.70	9.78	9.79	9.84	9.96	1.2

1/ See footnote 1, table B-2

2/ Includes mining, not shown separately, because its seasonal component is too small to be separated out with sufficient precision.

3/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

4/ Change was -0.2 percent from May to June 1990, the latest month available.

5/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available

p/ = preliminary

ESTABLISHMENT DATA

Table B-3. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	July 1989	May 1990	June 1990p/	July 1990p/	July 1989	Mar. 1990	Apr. 1990	May 1990	June 1990p/	July 1990p/
Total private	131.2	129.9	132.8	133.1	129.2	130.5	130.0	130.1	130.7	130.8
Goods-producing industries	103.6	101.6	104.0	101.8	103.0	102.3	100.9	101.6	102.0	101.1
Mining	80.7	88.8	92.6	90.8	80.3	87.7	88.5	89.6	92.1	90.7
Construction	156.1	143.9	151.6	151.1	142.7	146.7	139.3	141.4	142.8	138.0
Manufacturing	94.5	94.0	95.4	92.8	96.3	94.4	94.8	94.5	94.5	94.5
Durable goods	91.6	91.8	92.8	89.7	93.8	91.9	91.3	91.9	91.9	91.8
Lumber and wood products	105.4	103.6	106.3	103.6	102.6	103.9	103.3	103.3	102.4	101.2
Furniture and fixtures	107.9	107.1	108.4	104.8	113.2	108.9	108.1	109.2	109.2	109.2
Stone, clay, and glass products	92.5	89.3	90.9	88.1	90.8	88.4	87.0	87.7	88.1	86.1
Primary metal industries	66.2	65.8	66.6	64.6	67.9	65.2	64.1	65.9	66.0	66.3
Blast furnaces and basic steel products	52.7	51.2	51.6	51.7	52.0	50.0	50.8	51.4	50.8	51.6
Fabricated metal products	87.6	88.9	89.7	86.8	90.7	88.9	88.5	89.1	88.8	89.7
Machinery, except electrical	91.9	91.7	91.9	89.2	94.0	91.9	91.0	91.8	91.5	91.1
Electrical and electronic equipment	94.9	94.3	95.6	92.0	97.6	96.9	95.8	95.6	95.6	94.8
Transportation equipment	94.1	97.4	98.0	93.5	98.6	95.0	95.2	95.9	97.1	97.8
Motor vehicles and equipment	80.8	86.1	87.3	81.0	85.7	82.5	80.4	84.1	85	86.9
Instruments and related products	114.7	114.5	116.1	114.1	116.9	114.7	115.5	115.5	115.5	116.1
Miscellaneous manufacturing	81.9	85.1	85.7	80.6	85.7	86.8	85.1	85.4	84.8	84.6
Nondurable goods	98.9	97.2	99.2	97.5	100.2	98.0	98.1	98.4	98.5	98.4
Food and kindred products	108.6	101.8	105.3	107.5	106.4	104.7	105.6	106.1	105.2	106.1
Tobacco manufactures	62.5	60.5	61.9	62.9	70.5	67.1	66.5	66.9	66.2	70.5
Textile mill products	78.5	76.6	77.7	74.5	81.5	76.6	76.7	76.9	76.9	76.7
Apparel and other textile products	81.5	80.2	81.6	77.5	84.9	79.7	80.2	80.0	80.1	81.0
Paper and allied products	102.1	101.7	103.7	102.5	102.7	102.1	102.9	102.7	103.0	102.7
Printing and publishing	136.5	139.1	139.5	138.5	137.7	140.7	139.5	140.2	141.0	140.1
Chemicals and allied products	101.5	101.1	102.5	101.4	101.5	101.5	101.5	101.7	101.4	101.7
Petroleum and coal products	86.5	85.5	95.4	92.4	85.2	86.4	84.9	84.7	89.8	89.4
Rubber and misc. plastics products	115.2	116.0	117.9	115.8	118.8	115.1	114.7	116.2	116.5	117.3
Leather and leather products	52.2	51.4	52.5	48.9	54.7	55.0	51.8	50.9	51.0	51.2
Service-producing industries	146.5	145.5	148.7	150.4	143.7	145.8	146.1	145.8	146.6	147.1
Transportation and public utilities	118.8	120.5	123.5	123.2	117.7	120.6	120.5	120.8	122.0	121.9
Wholesale trade	128.7	128.7	130.9	131.2	127.2	129.0	129.2	129.0	129.8	129.6
Retail trade	132.6	128.7	132.1	134.2	128.9	128.7	129.4	129.0	129.5	130.3
Finance, insurance, and real estate	147.6	145.0	147.8	150.9	145.0	145.8	146.7	145.6	146.0	147.9
Services	173.9	174.8	178.2	180.5	170.8	175.1	175.0	175.0	175.9	176.3

1/ See footnote 1, table B-2.

p = preliminary.

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonagricultural payrolls, 349 industries1/											
Over 1-month span:												
1988	60.7	63.5	63.0	62.8	61.3	67.2	63.6	58.0	55.4	63.9	68.2	64.6
1989	68.3	60.5	61.0	58.2	55.6	59.7	55.6	57.4	47.9	55.3	60.9	51.9
1990	58.5	57.9	52.3	47.9	55.2	p/49.3	p/51.9					
Over 3-month span:												
1988	64.8	65.6	69.5	70.2	71.1	71.9	71.2	64.2	65.3	70.1	73.4	74.6
1989	71.6	70.1	64.5	61.9	61.6	60.7	61.6	53.4	54.6	55.7	57.2	60.2
1990	58.2	58.9	51.9	51.1	p/49.4	p/52.9						
Over 6-month span:												
1988	69.9	70.2	71.5	73.9	73.9	69.1	70.2	74.6	73.5	73.9	74.5	75.8
1989	75.1	69.5	68.2	66.0	65.0	57.9	57.7	60.2	53.4	58.3	58.3	60.2
1990	55.7	52.7	p/54.3	p/52.1								
Over 12-month span:												
1988	76.2	76.1	74.8	74.6	75.8	74.9	78.1	75.5	75.5	74.8	74.9	74.1
1989	73.2	73.6	69.6	67.6	66.6	62.6	63.6	63.2	60.7	57.2	56.7	p/53.7
1990	p/52.6											
	Manufacturing payrolls, 141 industries1/											
Over 1-month span:												
1988	58.5	56.0	55.0	59.9	58.5	61.7	59.6	51.1	49.3	62.8	64.9	58.5
1989	62.4	53.5	53.2	49.6	46.8	48.6	49.6	45.4	34.8	52.1	48.2	44.7
1990	45.4	49.3	45.6	46.5	46.8	p/41.8	p/51.1					
Over 3-month span:												
1988	63.1	61.0	62.4	64.9	67.4	67.0	64.5	58.2	62.1	66.7	71.5	70.9
1989	67.4	63.8	55.7	51.8	49.5	48.6	47.9	54.0	41.8	41.5	46.5	41.1
1990	42.2	41.5	44.0	41.5	p/41.5	p/47.5						
Over 6-month span:												
1988	66.3	66.3	67.7	69.5	66.7	64.2	66.0	70.9	68.8	69.9	71.6	74.1
1989	69.5	58.5	55.7	52.8	48.9	39.0	40.1	41.8	34.4	37.9	40.8	43.6
1990	38.7	35.1	p/37.9	p/42.9								
Over 12-month span:												
1988	73.8	70.2	70.9	71.6	72.0	69.9	70.9	69.1	71.6	70.2	69.9	67.0
1989	63.1	63.8	57.1	53.5	49.6	42.9	43.3	42.2	37.6	37.6	35.1	p/32.6
1990	p/34.8											

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p/ = preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative HAMILTON. Now, the decline of employment by 435,000 in July, the unemployment rate jump of three-tenths of 1 percent—there are a lot of other signs of weaknesses.

Do you see the unemployment rate, the July increase, as a first sign of a recession?

Mrs. NORWOOD. We have been reporting for many months very slow employment growth. It is unusual for such slow employment growth to be accompanied by a stable unemployment rate, because of the size of the labor force increase.

We have been lucky, I think, in one sense that the population movements have been such that the labor force growth has slowed considerably. This month we have had an increase in unemployment for adult men. That is probably associated with many of the goods-producing industries which have been in decline.

I think it's too early to read anything into this single month of numbers. But, obviously we would prefer to be here with a better report.

Representative HAMILTON. You would not view these numbers as a significant deterioration in the state of the economy?

Mrs. NORWOOD. I think there has been a deterioration in the employment situation, without any doubt.

Representative HAMILTON. Now, in your statement, you give a lot of emphasis to the teenager problem.

Mrs. NORWOOD. Yes.

Representative HAMILTON. Was the increase in unemployment in July concentrated mostly among teenagers or were adults affected as well?

Mrs. NORWOOD. Men, aged 25 to 54, were affected. But, the largest part of the increase in unemployment was concentrated among the youth of the country.

Representative HAMILTON. Is that problem with young people, the teenagers, a cyclical problem or is it the long-term problem that we associate with dropouts and low-educational performance?

Mrs. NORWOOD. I think it's a bit of both. Clearly, the longer term problems are with us and particularly for the minority youth they are extraordinarily serious.

The cyclical problems, I would suggest, are related to the slowdown, the very real slowdown, in growth in retail trade, which has been essentially flat for some months, and in some of the services industry, a little bit in construction perhaps where at least in the summer youth do tend to find jobs. There are just fewer jobs there for them to find.

Representative HAMILTON. Now, the labor force declined in July by 70,000; is that correct?

Mrs. NORWOOD. Yes.

Representative HAMILTON. And, the number of people not in the labor force rose by 230,000.

Mrs. NORWOOD. Yes.

Representative HAMILTON. Why has the labor force growth been so much less than in recent years?

Mrs. NORWOOD. Well, first, the labor force tends to grow in fits and starts. And, we need to look at it over several months.

But, you are quite right. We have had, for some months, very, very slow growth.

Part of that is because of the slower population growth which is the result of the low birth rate some years ago. That's an important part of all this.

Part of it is that there seems to be some reduction in the participation rates, particularly for teenagers. And, we are not quite sure really how to explain that.

Representative HAMILTON. Do we have a lot more people becoming discouraged now about job opportunities and dropping out of the labor force?

Mrs. NORWOOD. As you know, we get those data only once a quarter. There was a very large increase in the last quarter in the number of discouraged workers.

I would feel that it would be better to wait for another quarter to be sure about that, because it did seem as though it could perhaps have been an outlier. But, we will have to wait and see.

Representative HAMILTON. Was there any unusual increase in the automobile industry? We have heard there about building up inventories.

Mrs. NORWOOD. I don't think so, not this month.

Representative HAMILTON. No, not so?

Mrs. NORWOOD. Sales of autos are rather slow.

Representative HAMILTON. Yes.

Mrs. NORWOOD. But, I think what has been happening is that the automobile industry has been adjusting its work force by shutting down for a week or two at a time in order to adjust its inventories. And, their inventories seem to be in pretty good shape.

In fact, generally, inventories seem to be in pretty good shape, which is an encouraging sign, given the sort of lackluster nature of the economy.

Representative HAMILTON. If you take a little longer view here, economic growth slowed in the second quarter to 1.2 percent compared to the 1.7 percent in the first quarter. And, private sector employment grew only 60,000 during the quarter.

Despite that slow growth, the unemployment rate actually declined during the quarter from 5.4 to 5.2 percent. Why did the unemployment rate decline during a period of slowing growth?

Mrs. NORWOOD. Basically, because we did not have the increase in the labor force that we have normally had. And, that is perhaps two phases.

One is there are fewer people, particularly teenagers. The number of teenagers who are of labor force age is down. And, part of it may be that fewer people are encouraged to go into the labor force when there is very, very little or slow job growth.

Representative HAMILTON. Well, during the 1970's and the 1980's we saw these big increases in the number of women and teenagers.

Mrs. NORWOOD. Oh, yes.

Representative HAMILTON. Are those trends now at an end do you think, or are they coming to an end?

Mrs. NORWOOD. I wouldn't say they are coming to an end. I think that insofar as women are concerned, we did have the very vigorous increase in labor force participation during the 1960's and the 1970's. I believe that an increase is going to continue over a longer time, if you take a longer view, but I don't think it will continue at the same rate of increase.

I think we've already had that big rate of increase. Women will continue to come into the labor force in greater numbers than before, but the rate of increase of the labor force participation for them will be less.

For young people, again one of the big factors that has permitted us to maintain a fairly stable unemployment rate has been the fact that there is less upward pressure on unemployment, because there are fewer youngsters. And, that's just in their total number, as well as those coming into the labor force.

A lot of them are staying in school, but there are also just fewer of them in the population. So, these very high unemployment rates for youngsters, which we will always have I believe—and, by the way, that is not necessarily a bad thing, because young people should be experimenting with jobs and going back and forth to school and work.

But, nevertheless, the fact that we've had a smaller number of people with those very high unemployment rates has meant that there is much less upward pressure on the overall unemployment rate.

Representative HAMILTON. Congressman Wylie.

Representative WYLIE. Thank you very much, Mr. Chairman. It's always a pleasure to welcome you, Mrs. Norwood, and your colleagues to this hearing.

It has been a few months since I have had the opportunity to visit with you. But, over the years I have looked forward to your incisive and knowledgeable testimony. And, Mrs. Norwood is always one of our very best witnesses who appears here, Mr. Chairman.

The July employment report is not real encouraging, at least from this Member's perspective. I note that employment in both the household and payroll surveys declined.

Of course, the rise in the civilian unemployment rate is not pleasant news. But, I'm glad to hear you say that we should not be tempted to jump to the conclusion that the economy is contracting.

I think it's fair to say that we should be cautious about drawing a conclusion on just 1 month's employment data. I would hope that 1 month is not a trend to make.

Is that a fair appraisal of what you have just said?

Mrs. NORWOOD. Yes, I think so. I don't want to overemphasize that, however, because I think it's very clear not just from these data, but from data on the gross national product that the economy is in a very slow growth stage.

We are not heading downward—I think that's the important thing—quite yet. And, I don't know whether we will or not. I don't think these data tell us that.

But, it is clear that economic growth in general is very slow.

Representative WYLIE. I am not sure that you are equipped to answer this question, although I have learned from past experience not to make a judgment as to the extent of your knowledge, Commissioner.

If the economy is fairly weak, it may be vulnerable to policy mistakes. And, I'm asking this question in the context of talk about a tax increase.

If a policy mistake causes a recession to begin in September or October, how long would it take this downturn to be reflected in the employment data.

Mrs. NORWOOD. I don't think anyone can really answer that question with any degree of accuracy, because it depends really on what action is taken and what sectors of the economy are affected.

It's quite clear that there are some very difficult policy choices facing the Congress and the administration and the Government as a whole.

Representative WYLIE. Speaking of sectors of the economy, within the manufacturing sector, employment in the durable goods industries appears to be especially weak.

Mrs. NORWOOD. Yes.

Representative WYLIE. What are the causes of this?

Mrs. NORWOOD. That has been going on for some time. It you just looked at manufacturing by itself over the last, oh, 9 or 10 months I suppose, we would say that it is pretty much in that particular industry that it has been going down steadily.

Part of it has been the automobile industry, which has been adjusting its inventories by adjusting workers. Part of it has been export markets which, as you know, sometimes go up and sometimes go down. And, we don't seem to have been terribly successful in some of them.

Part of it has been that the high-tech industries, which as you know, tend to go up and down, at the moment are more in a downtrend. Clearly, construction has not been doing very well. The housing market all over the country, for a variety of reasons, is in difficulty.

And, it would be surprising, I think, given the data on permits for new bui'dings, to see much of an increase in construction. So, after seasonal adjustment, there is quite a decline in construction.

I think what has been holding the economy up has been services, and in particular the services industry itself. And, it is not clear whether the changes that we are seeing in July in that particular industry—health care, for example—will hold up. That is still growing, but it's just not growing at as fast a pace as it was.

Business services, which early in the expansion period were growing very fast and have slowed considerably and in recent months really have been showing a ccuple of declines or very, very slow growth.

Representative WYLIE. I would like for you to comment on the regional patterns in the employment situation. As you see them from your data here, it would appear that the Northeast is bearing the brunt of the economic slowdown, if I may use that expression.

In other words, this appears to be the area which is sort of dragging, if I may use that expression, too, the employment rate down.

Is that fair to observe? And, if so, what is the cause?

Mrs. NORWOOD. Well, let me just say that part of that is the up and down nature in the high-tech industry which, of course, has been an important element in Massachusetts as well as some of the other New England States.

But, Mr. Plewes can tell you more about that.

Mr. PLEWES. I really think there are two things going on regionally. And, I think you are quite correct in saying that the Northeast is bearing the brunt of this economic slowdown.

Over the year, for example, the unemployment rate for the Northeast States has gone up by eight-tenths of a percent. The rate for the Midwest States has gone up two-tenths of a percent. The rate for the South has gone down two-tenths. And, the rate in the West has gone down two-tenths.

Another thing that is happening is that these rate changes have led to a convergence in the unemployment rates around the country. We are getting much more alike each other, if you will, now that those events have occurred.

Indeed, no regional rate this month was more than two-tenths of a percentage point above or below the national average. So, I think we are getting a lot more of the same in these changes.

Representative WYLIE. Thank you. Thank you, Mr. Chairman.

Representative HAMILTON. Congressman Solarz.

Representative SOLARZ. Thank you very much, Mr. Chairman. I just have one or two questions.

I have been a little bit puzzled by the unemployment rate in a place like New York, for example, that it hasn't gone up more than it has, in view of all the anecdotal reports one hears about the precipitous decline in real estate values, people being laid off in the Wall Street brokerage houses, law firms cutting back on hiring. And, everybody I speak to in business in New York is grumbling business is off. You know, apartments and homes can't be sold and when they are sold they are sold for much less than people had originally asked for.

And, yet the unemployment rate—you know, it has gone up a little bit but not all that much. How do you explain that?

Mrs. NORWOOD. Well, the housing situation, which you refer to, is true really not just in New York but certainly in most of the major cities of the country, possibly not so much in the Southwest as in other parts of the country.

Part of it again is the labor force. The population in New York has not been increasing. It has been increasing rather rapidly in the western part of the country, maybe in the South, but certainly not in New York.

And, therefore, there is less upward pressure, less pressure from the labor force of people coming in.

Representative SOLARZ. Why has unemployment gone down in the West and the South, whereas it has gone up in the Northeast and the Mid-Atlantic States?

Mrs. NORWOOD. I think it is basically the industry composition of those areas. We are seeing a resurgence of the oil and gas extraction, which was down so much during the last recession. And, some of the aerospace industry and some of the other developments on the west coast, lumber and things of that sort, have been doing better.

So, it's industry composition, probably.

Representative SOLARZ. What impact on unemployment do you think Saddam Hussein's latest real estate acquisition will have?

Mrs. NORWOOD. I really have no idea, but it is very worrying.

Representative SOLARZ. Let me ask you finally, I gathered last October you did a survey of the 2.5 million young people who graduated from high school in 1989.

Could you tell us how many of them went on to college and how many tried to find jobs?

Mr. PLEWES. We do this survey every October. Last October, we found that 60 percent of the high school graduates from the year previously were enrolled in college in October.

Representative SOLARZ. Sixty percent?

Mr. PLEWES. Sixty percent, yes, sir.

Representative SOLARZ. Is that pretty much what it has been for the last few years?

Mr. PLEWES. That is going up somewhat overall and, unfortunately, down for some population groups. But, yes, it's up somewhat.

I think that the interesting things have to do with what happens with persons who are—as the Commissioner talked about—persons who are dropouts, who are not in school and look at their labor force situation. And, I think that I commend you to that portion of her testimony. We talk about that.

Representative SOLARZ. I saw a rather shocking statistic awhile ago to the effect that there were more young black males in the prison system than in college. Do you know if that is accurate?

And, if you don't know, is it possible for you to do some research into this and get back to us to whether it is accurate? By the prison system, they didn't mean necessarily in prison but perhaps on probation or parole.

And, it seemed a truly shocking figure.

Mrs. NORWOOD. I think it's a staggering situation there, and I have seen some of those data. If you would like, we could check with the Bureau of Justice Statistics and the Center for Educational Statistics to see what they have.

Representative SOLARZ. Could you?

Mrs. NORWOOD. Sure.

Representative SOLARZ. It seemed so stunning and shocking and staggering.

Mrs. NORWOOD. We will be glad to do that.

Representative SOLARZ. I wanted to get some sense of whether the numbers were really accurate or not.

Thank you very much, Mr. Chairman.

[The following information was subsequently supplied for the record:]

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

Honorable Stephen J. Solarz
House of Representatives
Washington, D.C. 20515

Dear Congressman Solarz:

I am responding to the inquiry you made during my August 3 appearance before the Joint Economic Committee regarding the number of young black men in college and in prison.

Data collected from the Current Population Survey in October 1989 indicate that about 330,000 black males ages 18 to 24 were attending college. In comparison, the Bureau of Justice Statistics of the U.S. Department of Justice estimates that the number of black males ages 18 to 24 in jails or prisons was about 133,000 in 1989. (See below.)

Local jails.....	55,000
State prisons.....	77,000
Federal prisons....	1,325
Total.....	133,325

Data on young black males on parole or probation are not tabulated separately by the Justice Department. For additional information on these topics, your office may wish to contact the Bureau of Justice Statistics directly, on 307-0765.

Please let me know if I can be of further assistance.

Sincerely yours,

JANET L. NORWOOD
Commissioner

Representative HAMILTON. OK. I wanted to ask a question or two with respect to inflation.

What are the trends in compensation and wages that affect the outlook for inflation and how is inflation affected?

Mrs. NORWOOD. We are seeing a bit of heating up in compensation costs, both the fringe benefit side and the wage and salary side. It is still rather small.

But, nevertheless, there is some evidence that there could be in the future a little bit of upward pressure there.

Thus far, the second quarter of the year has seen moderate rates of inflation. We did have, as you know, that very, very vigorous growth of prices in the first quarter, an 8.5 percent rate; whereas, the seasonally adjusted rate for the second 3 months was only 3.5 percent.

Representative HAMILTON. How do you describe your reaction to this? Is this something that is alarming? Is it something we have to be concerned about? Is it run of the mill?

How do you assess it?

Mrs. NORWOOD. Well——

Representative HAMILTON. Disturbing?

Mrs. NORWOOD [continuing]. I think that we have seen a change in inflationary expectations in this country. Moderation and inflation now seems to be 4 or 5 percent.

As you know, some years ago, in the 1970's——

Representative HAMILTON. Wage and price controls.

Mrs. NORWOOD. Yes, exactly. So, it depends on where you are coming from.

I think any heating up of inflation is, of course, a matter of concern, because it will affect very much both the Federal Government's budget as well as the budget of all people.

Representative HAMILTON. Excuse me, I didn't mean to interrupt you.

Mrs. NORWOOD. One point I would like to make is that we talk all the time about rates of increase of the CPI. And, when they are slow we look at that as being very good news. And, it is.

Nevertheless, we should recognize that much of these increases are cumulative, so that when you have to go to the grocery store and there is a very small increase in food prices this month, you are still facing all the larger increases added up that occurred in the previous couple of years.

So, there are serious problems here.

Representative HAMILTON. We had an increase in the minimum wage that took effect April 1.

Mrs. NORWOOD. Yes.

Representative HAMILTON. When you get a jump like that in the minimum wage, do you usually see an increase in the inflation rate or not? And, could you detect it this time?

Mrs. NORWOOD. We have no evidence that there has been a direct effect of the minimum wage yet in our data. It may be a bit soon to see it.

But, even in the wage data there is not a lot of evidence of big movement. Now, some of that may be because, as you recall, the change in the minimum wage is really making it a somewhat more

realistic minimum. Many people were already above the minimum. There are still some who were not, who are moving up.

Often, what we see is that when the bottom moves up the whole wage structure moves up. It's not just the people at the bottom.

But, we don't have any evidence of that yet. We looked at it rather carefully in our employment cost index, where we would be seeing this structural change. We don't see a lot of evidence in it.

There is some evidence that we are beginning to look at from the current population survey, and we will be watching that with some care.

Representative HAMILTON. Congressman Wylie.

Representative WYLIE. I note that the unemployment rate rose from 5.2 percent to 5.5 percent nationally for the month of July. And, I need to get provincial for just a minute.

I was looking at the figure for Ohio. And, in May it was 5.9 percent and then it declined to 5.2 percent, which is a rather decided drop. And, now, it's back to 5.7 percent. But, the employment force was 5,107,000 in May and it's 5,104,000 now, which isn't a really big difference.

And, yet the unemployment rate jumped. Is there something significant about that?

Is that a significant increase in unemployment?

Mrs. NORWOOD. It's borderline. It's marginal. It requires eight-tenths percent to be significant and it was five-tenths percent. It's close.

I think, again, we need to see what happens in the next couple of months.

The unemployment data for the States and local areas are a real problem for us statistically, because the only way you can really do them well is to have huge samples. And, that obviously is very expensive and it's a very great burden on the population of the country.

So, we try to use a mixture of survey data, and Ohio is one where we do have survey data. But, the samples are rather small. And, then we try to use administrative data to see how we can get a better fix on that.

I think that over the year we can look at it, from year to year very well, or over a period of several months.

Representative WYLIE. Does your Bureau collect that data? Or, do you depend on data which is supplied to you by the Bureau of Employment Services in Ohio?

Mrs. NORWOOD. No, no, no. We have a combination really. The data for the State of Ohio come from the current population survey, which is what we are using for our report this morning, to give you an indication of what is happening to the Nation as a whole.

In addition, of course, we have our business survey where the Employment Security Agency of the State of Ohio is a cooperating partner, and they collect data for us. And, then we have a series of administrative data, which give us some of the sub-State estimates, an ability to break this down for some of the areas within the State of Ohio.

But, the basic data we are talking about now on unemployment for the State of Ohio comes from the current population survey.

And, of course, it has a much larger margin of error surrounding the estimate than the national estimate does, because it's a smaller sample.

Representative WYLIE. All right. That's interesting information. And, it's not something to be really alarmed about as far as Ohioans are concerned.

Mrs. NORWOOD. No, I don't think so, not this change. I think it has been fairly stable really for the year.

Representative WYLIE. For the year?

Mrs. NORWOOD. Yes.

Representative WYLIE. OK. Thank you very much. Thank you, Mr. Chairman.

Representative HAMILTON. Mrs. Norwood, you are going to get a break this morning. We have a vote here and a lot of things popping. So, I don't think we are going to try to come back.

Thank you very much for your appearance. We may submit some additional questions to you in writing that we didn't get to here. If you could handle those, we would appreciate it, for the record.

And, without objection, those responses will be made part of the record.

We stand adjourned.

Mrs. NORWOOD. Thank you very much.

[Whereupon, at 10:06 a.m., the committee adjourned, subject to the call of the Chair.]

[The following written questions and answers were subsequently supplied for the record:]

RESPONSES OF HON. JANET L. NORWOOD TO ADDITIONAL WRITTEN QUESTIONS POSED BY REPRESENTATIVE HAMILTON

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Congress of the United States

JOINT ECONOMIC COMMITTEE

CREATED PURSUANT TO SEC. 5(a) OF PUBLIC LAW 304, 79TH CONGRESS

Washington, DC 20510-6602

August 3, 1990

The Honorable Janet Norwood
Commissioner
Bureau of Labor Statistics
441 G Street, N.W.
Washington, D.C. 20212

Dear Madam Commissioner,

Thank you very much for appearing before the Joint Economic Committee this morning and for your excellent testimony on the employment and unemployment situation for July.

Because of the early vote, I was not able to address all of the issues I had hoped to raise during the hearing and I would appreciate having your answers to the following questions for the hearing record:

1. During the June hearing, you reported that payroll employment grew 160,000 in May and that all of this growth resulted from temporary hiring for the 1990 Census. With this morning's release, the total was revised to 370,000, including 110,000 jobs in the private sector. I've noticed that similar revisions have occurred on several other occasions during the past year or so. What causes this kind of situation and what is BLS doing to resolve it?

2. During this morning's hearing, you discussed the labor market difficulties of black and Hispanic teenagers, particularly those who are high school dropouts. The Bureau of Labor Statistics' recent release on the labor market activities of 1989 high school graduates suggests that even those who remain in school until they graduate are having unusual difficulties finding jobs. To quote the release,

> any advantage in job prospects resulting from a reduced labor supply appears to have been offset by a decline in the number of job opportunities available to them.

What has caused this decline in job opportunities for high school graduates? Is it the result of permanent long-term changes in the economy or do you expect the problem to disappear when economic growth picks up again? Finally, is the problem concentrated among black and Hispanic high school graduates or do all high school graduates face bleak employment opportunities?

3. During the past year and a half, the economy grew at an annual rate of around 1.2 percent. Yet, until July, the unemployment rate was virtually steady at 5.3 percent. What has happened to Okun's Law, which said we need 2½ percent growth to keep the unemployment rate from rising? Can we keep unemployment steady with 1.2 percent growth in the future? Could labor shortages limit the ability of the economy to grow at a 2½ to 3 percent rate in the next few years? If the economy rebounds to an annual growth rate of 2½ to 3 percent, would that tighten labor markets to such an extent that it would cause inflation?

I would appreciate having your response to these questions at your earliest convenience.

Again, thank you for your excellent testimony.

Sincerely,

Lee H. Hamilton
Chairman

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

SEP 7 1990

Honorable Lee H. Hamilton
Chairman, Joint Economic Committee
Congress of the United States
Washington, D.C. 20515

Dear Mr. Chairman:

I am responding to your letter of August 3, in which you raised three questions that could not be covered during my testimony before that day's Joint Economic Committee session.

Your first question related to recent revisions to the monthly payroll employment figures. As you know, these estimates are derived from a monthly survey of approximately 340,000 business establishments that is conducted as a Federal/State cooperative program, with the States collecting the data by mail and forwarding them to the Bureau for use in producing the national estimates. Due to the very tight timing requirements for our initial publication, not all of the data are submitted by the companies in time for the initial publication of a given month's estimates. During the subsequent 2 months, as data from the full sample are mailed in, revised estimates are produced. Thus, the principal cause for the revisions is the delay in the collection process.

While revisions are a normal part of the current survey process and while their size does vary--with occasional large revisions taking place during the year--their average size has decreased considerably over the past decade. Nevertheless, the Bureau is still very much concerned with the revisions. To deal with the problem, we have been conducting research on highly automated collection methods, including pioneering efforts in the area of computer-assisted telephone data collection. We have successfully developed systems for computer-assisted telephone interviewing, which, along with systems which allow for employer touchtone data entry reporting and voice-recognition reporting, will speed up the receipt of data from reporters. The President's budget for the upcoming fiscal year contains a funding request for the initiation of these automated collection methods in the largest States. If put in place, these automated data collection systems would be a first step in reducing the magnitude of the revisions to the payroll employment estimates.

SEP 7 1990

The second issue you raised concerned the labor market difficulties facing the high school graduates of 1989 who did not go on to college. As you noted, our June 26 news release compares the employment situation of the 1989 high school graduates who did not enter college with similar youth 10 years earlier. We found that, despite a 38-percent decline in the number of high school graduates over the period, the unemployment rates for the two groups were not significantly different.

Before conjecturing on the possible causes for this situation, it is worth noting that the absolute decline in the number of high school graduates not attending college was a function of both demographics--the 1989 graduates are part of the relatively small "baby-bust" cohort--and of an increase in the proportion of high school graduates attending college. About a third of the decline can be attributed to a rise in college enrollment rates, which increased from 49 percent in 1979 to 60 percent in 1989.

A partial explanation for the stubbornly high unemployment rates for high school graduates may lie with the paucity of job opportunities for young jobseekers in the manufacturing industry. Current employment levels in manufacturing are well below the levels found in 1979, so that, while 29 percent of employed men age 20 to 24 worked in factories in 1979, only 19 percent did so in 1989.

The labor market difficulties faced by young high school graduates are not confined to blacks or Hispanics, although such problems seem to be more serious for these individuals. The unemployment rate for white high school graduates of 1989 not enrolled in college was 13.6 percent, compared with a rate of 23.3 percent for their black counterparts. (Due to the small size of the Hispanic cohort and the resulting high sampling error, unemployment rates for this group are not published.) Numerically, whites accounted for nearly 8 of 10 of these unemployed high school graduates.

It should be noted that the unemployment rates of workers at every level of educational attainment typically decline with age, and this can be expected to help even those who do not go on to college. However, the employment requirements we project for the year 2000 suggest that job opportunities in the fastest growing occupations will require education beyond high school. Such projections do not bode well for the employment and earnings prospects of the less well educated in our society.

Honorable Lee H. Hamilton--3

SEP 7 1990

The final issue you raised concerned the relationship between unemployment and the growth rate of real Gross National Product (GNP), as modeled by "Okun's Law." In its original formulation, Okun's Law was an empirically-based observation relating a change in the unemployment rate with a change in the growth rate of GNP. Data for the 1950s and 60s suggested that a 1-percentage-point increase in the unemployment rate would be accompanied by a 3-percent decline in GNP. Structural change in the economy during the 70s and 80s altered this relationship, lowering the ratio to about 1:2.5.

An alternative interpretation of Okun's Law relates a certain growth rate of potential GNP with constant unemployment, as you have suggested. If one accepts 2.5 percent annual growth as a correct estimate of potential GNP, then the low growth rate of GNP and the fairly steady rate of unemployment which have been observed over the past 2 years do indeed seem inconsistent with Okun's Law. However, Okun's Law is based on observation of past trends. We suspect that there will be periods in which the exact relationship does not hold; indeed, there have been such periods in the past.

Estimates of potential GNP are principally based on steady growth rates of the labor force and productivity. During the past year, we have experienced particularly slow labor force growth, which goes a long way in explaining the lack of much upward pressure on the unemployment rate. As for the future, in the Bureau's moderate growth scenario, we projected a 2.3-percent annual growth rate of GNP to the year 2000 and an annual labor force growth of 1.2 percent.

I hope I have satisfactorily answered your questions. Please let me know if I can be of additional assistance.

Sincerely yours,

Janet

JANET L. NORWOOD
Commissioner

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, SEPTEMBER 7, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:32 a.m., in room 2359, Rayburn House Office Building, Hon. James H. Scheuer (member of the committee) presiding.

Present: Representative Scheuer.

Also present: William Buechner, Steve Baldwin, and Jim Klumpner, professional staff members; and Joe Cobb, minority staff director.

OPENING STATEMENT OF REPRESENTATIVE SCHEUER, PRESIDING

Representative SCHEUER. The Joint Economic Committee will come to order.

In the absence of Chairman Hamilton, I am very pleased to welcome Commissioner Janet Norwood of the Bureau of Labor Statistics before the Joint Economic Committee this morning.

Commissioner Norwood and her colleagues are here to testify on the employment and unemployment data for August 1990.

Commissioner Norwood, we welcome you and we are very pleased to have you here, and I am delighted to have the chance to chair this hearing.

Before you present your statement on the August figures, I want to focus briefly on the jobs situation for young people this summer.

Earlier this week the BLS issued a release on the youth labor force this summer which presented some very disturbing data, which you very clearly identified yourself.

According to that release, the labor force participation rate among young people aged 16 to 24 years old fell 2.3 percentage points between last summer and this summer, and what is most disturbing, and what you found disturbing I presume from your language, is the decline in the labor force participation of black youths.

Mrs. NORWOOD. Yes.

Representative SCHEUER. Only 62 percent of the black youths worked or looked for work this summer, 6 percentage points less than last summer. By contrast for white youths, it was down only 1.3 to 78.3 points as contrasted to 62 percent for the black youths.

You yourself in your press release said, "The 16 percentage point gap between the races in the July labor market participation rates is the broadest since separate statistics for blacks were first tabu-

lated in 1972." So you yourself clearly identified this as an area that should give us deep concern.

Your data showed the same discrepancy in the percentage of each group that actually found jobs; 71.4 percent of all white youths aged 16 to 24 had jobs this summer, while only 46.9, roughly 47, percent as against 71 percent of white youths, but only 47 percent of black youths had jobs.

Not only was the gap large to begin with, but it also grew almost 6 percent since last summer.

This summer there were 1.1 million fewer jobs for young people than last summer, according to your own press release, and this cutback in summer jobs, particularly for black youths, hurts our society and our economy badly at a time when we are trying to make our economy more competitive and more productive, and when we are trying to give young people an incentive to stay in school and out of criminal activity, out of drugs, out of welfare, and when we want to make them tax producers and not tax eaters. And we certainly want to do everything we can to stop and impede and slow down the growth of a subgroup of young people in our society who clearly aren't going to make it.

It's a terribly disturbing thing to us. So we may want to discuss this with you further today or perhaps when you come back next month.

In any event, we appreciate your highlighting these significant and troublesome trends. We didn't have to ferret them out for ourselves. You presented them very fairly and in a very straightforward fashion.

We're very happy to have you here to testify. Please take as much time as you may need.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS

Mrs. NORWOOD. Thank you very much. We are very happy to be here.

As usual, I have with me on my right Kenneth Dalton, our Associate Commissioner for Prices and Living Conditions, and on my left Thomas Plewes, who is our Associate Commissioner for Employment and Unemployment.

The Nation's employment situation showed further signs of weakness in August. The survey of business establishments indicates that substantial job losses occurred in the goods-producing industries and that the private service-producing sector had relatively little employment growth.

The civilian unemployment rate, at 5.6 percent, was three-tenths of a percentage point above the 5.3 rate that generally prevailed through 1989 and the first half of this year.

A closer look at the results from the business survey shows that construction employment fell by 40,000 in August. Job losses in that industry since May now total nearly 100,000.

Factory jobs declined in August by 45,000. Since manufacturing employment began to slide early last year, 455,000 factory jobs have been lost.

In August, 30,000 jobs were lost in the electronic equipment and transportation equipment industries combined, accounting for the bulk of the over-the-month decline in manufacturing.

The service-producing sector has also weakened, after many years of strong job growth during the expansion. Now, only health services and State and local government are sustaining a strong pace of job creation.

Health services provided 45,000 additional jobs in August, and State and local governments added 60,000 more between them. And employment in other service-producing industries continued weak, so that the expected decline of census workers resulted in a decline of 75,000 in overall business payroll employment.

Our household survey data suggest that the civilian jobless rate has begun to move up, following an usually long period of stability.

When compared with a year ago, both teenagers and adult men have higher jobless rates. The jobless rate for adult men has increased by a full half a percentage point over the year to 5 percent, and the rate for teenagers, at 16.7 percent in August, was 2 percentage points higher.

In addition, the size of the teenage labor force continues to shrink—and at a rate far faster than the decline in their population. Over the last year, for example, the total number of 16- to 19-year-olds fell by 450,000, but their labor force fell by more than twice that amount.

For black teenagers, rising unemployment combined with declining labor force participation means that fewer than one in four black teenagers now holds a job.

The employment-population ratio for white teenagers has also been on a downswing, but the proportion of white teenagers with a job is twice that of black teenagers.

I should also note that the August data show the first signs of trouble in two unemployment indicators: Both the number of recently unemployed persons—those jobless for less than 5 weeks—and the number of unemployed job losers rose this past month.

In summary, the statistics for August released today provide evidence of further weakness in the Nation's job market. The manufacturing and construction industries continued to lose jobs, and only a few industries in the service-producing sector maintain much forward momentum.

Teenagers seem to have had the most problems in recent months, but few worker groups have been completely immune from the slowdown.

Mr. Chairman, we would be glad to try to answer any questions you have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1989										
August.....	5.1	5.3	5.3	5.2	5.2	5.3	5.2	5.3	5.2	.1
September...	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October.....	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.3	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.3	5.4	.1
1990										
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February....	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
March.....	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	5.?	.2
April.....	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
May.....	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	.1
June.....	5.3	5.2	5.2	5.2	5.1	5.2	5.2	5.2	5.1	.1
July.....	5.5	5.5	5.4	5.4	5.4	5.4	5.5	5.5	5.5	.1
August.....	5.4	5.6	5.6	5.6	5.6	5.6	5.5	5.6	5.6	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
September 1990

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News
United States Department of Labor
Bureau of Labor Statistics Washington, D.C. 20212

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USDL 90-461

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EDT), FRIDAY, SEPTEMBER 7, 1990

THE EMPLOYMENT SITUATION: AUGUST 1990

Employment continued to be weak in August and unemployment rose slightly, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The civilian worker unemployment rate edged up to 5.6 percent in August, after a more substantial increase in July.

Nonfarm payroll employment, as measured by the survey of business establishments, was little changed at 110.7 million in August, the second consecutive month it has failed to show any growth. Total civilian employment, as measured by the survey of households, fell for the second month in a row, to 117.7 million in August.

Unemployment (Household Survey Data)

Both the number of unemployed persons and the civilian worker unemployment rate edged up in August, after seasonal adjustment, with the number of unemployed reaching 7.0 million and the rate 5.6 percent. Prior to July, the jobless rate had fluctuated around the 5.3-percent mark for nearly 2 years. (See table A-2.)

Over-the-month movements in the jobless rates for most individual worker groups were very small but generally upward. August rates were 5.0 percent for adult men, 4.9 percent for adult women, 16.7 percent for teenagers, 4.8 percent for whites, 11.8 percent for blacks, and 7.8 percent for Hispanics. (See tables A-2 and A-3.)

The number of unemployed persons who lost their last jobs rose by 280,000 in August, while there was little change in the number who voluntarily left their last jobs or in the number who were entering the

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The establishment data shown in this news release have been adjusted to reflect annual benchmark revisions, the conversion of the industry series to 1987 Standard Industrial Classification (SIC) codes, and updated seasonal adjustment factors. In addition, all constant-dollar and indexed series have been rebased to 1982=100. See the note on the revisions beginning on page 4.

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			
	1990		1990			July-Aug. change
	I	II	June	July	Aug.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	126,300	126,550	126,466	126,394	126,300	-94
Total employment 1/	119,758	119,927	120,019	119,580	119,298	-282
Civilian labor force	124,619	124,908	124,836	124,767	124,660	-107
Civilian employment	118,077	118,285	118,389	117,953	117,658	-295
Unemployment	6,541	6,623	6,447	6,814	7,003	189
Not in labor force	62,793	62,916	63,141	63,369	63,601	232
Discouraged workers	747	893	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	5.2	5.2	5.1	5.4	5.5	0.1
All civilian workers	5.2	5.3	5.2	5.5	5.6	.1
Adult men	4.6	4.8	4.7	4.9	5.0	.1
Adult women	4.7	4.6	4.5	4.7	4.9	.2
Teenagers	14.5	14.8	14.1	16.3	16.7	.4
White	4.6	4.6	4.5	4.6	4.8	.2
Black	10.8	10.4	10.4	11.3	11.8	.5
Hispanic origin	7.5	7.6	7.1	7.9	7.8	-.1
ESTABLISHMENT DATA 2/	Thousands of jobs					
Nonfarm employment	109,911	110,541	110,829	p110,740	p110,665	p-75
Goods-producing	25,262	25,178	25,162	p25,100	p25,008	p-92
Service-producing	84,649	85,363	85,667	p85,640	p85,657	p17
	Hours of work					
Average weekly hours:						
Total private	34.5	34.6	34.7	p34.5	p34.5	p.0
Manufacturing	40.8	40.9	41.0	p40.9	p41.0	p.1
Overtime	3.6	3.7	3.8	p3.8	p3.9	p.1

1/ Includes the resident Armed Forces.

2/ Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) structure, and updated seasonal adjustment factors.

N.A. not available
p preliminary

labor force. The number of newly unemployed persons, those jobless for less than 5 weeks, rose by 200,000 to 3.3 million. (See tables A-7 and A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment fell by 300,000, seasonally adjusted, to a level of 117.7 million. Most of this decline occurred among teenagers. Total employment has declined by 730,000 in the last 2 months. As a result, the proportion of the working-age population that is employed (the employment-population ratio) declined to 62.5 percent in August, down by half a percentage point over the past 2 months. (See table A-2.)

The number of persons in the civilian labor force, 124.7 million, and the labor force participation rate, 66.2 percent, were little changed over the month, after seasonal adjustment. Over the past year, the labor force has increased by only 570,000, as growth in the working-age population has slowed and the percentage participating in the labor force has diminished. Virtually all of the reduced labor force participation has occurred among teenagers, whose participation rate was down by about 5-1/2 percentage points from a year earlier. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Payroll employment continued to be weak in August, as job declines occurred throughout the goods-producing sector. These losses were only partly offset by small gains in the service-producing sector. Largely because of a further decline in the number of temporary census workers, total payroll employment edged down by 75,000 over the month, following a decrease of 90,000 (as revised) in July. Employment growth in the private sector, which had been slowing since early 1989, has essentially halted during the last 2 months. (See table B-1.)

Goods-producing employment fell by 90,000 in August. The number of manufacturing jobs declined by 45,000, with virtually all of the losses occurring in durable goods industries, particularly in electronic equipment and transportation equipment. Since reaching a post-recession peak in January 1989, the number of factory jobs has declined by 455,000. The industries with the largest losses include electronic equipment (-100,000), motor vehicles (-80,000), apparel (-55,000), fabricated metals (-50,000), and instruments (-40,000).

Construction employment continued its recent downtrend with a 40,000 reduction in August and has lost nearly 100,000 jobs in the last 3 months. Employment in mining, which had grown by 60,000 since last July, decreased by 7,000 in August.

In the service-producing sector, the number of services industry jobs rose by 70,000 in August. Much of the gain came from health services, which has accounted for more than a quarter of the total job growth over the past year. In contrast, business services showed no change in August, following a small decline in July; this industry, which had seen rapid job gains during much of the expansion, has had much slower growth since early 1989.

State and local governments continued their employment expansion in August, adding 60,000 jobs. Overall government employment fell by 65,000 jobs, however, because of further reductions in the number of decennial census workers (which was down by an estimated 120,000 over the month). Retail trade showed little change over the month and has been unusually sluggish for most of this year. The wholesale trade, transportation and public utilities, and finance, insurance, and real estate industries all experienced small job gains in August after incurring small losses in the prior month.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonfarm payrolls was unchanged in August at 34.5 hours, seasonally adjusted. In manufacturing, the workweek and overtime each edged up by 0.1 hour to 41.0 and 3.9 hours, respectively. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers--which combines the effects of employment and hours--inched downward in August to 124.6 (1982=100), after seasonal adjustment. The index for manufacturing also edged down, to 107.2. Both indexes have shown little change thus far during 1990. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

After seasonal adjustment, average hourly and weekly earnings each edged up 0.2 percent. Prior to seasonal adjustment, average hourly earnings declined 1 cent to $9.99, while average weekly earnings fell $1.35 to $347.65. Over the year, average hourly earnings rose 4.0 percent and average weekly earnings were up 3.7 percent. (See tables B-3 and B-4.)

Revisions in Establishment Survey Data

In accordance with annual practice, the establishment survey data have been revised to reflect comprehensive universe counts of payroll jobs (benchmarks). These counts were derived principally from unemployment insurance tax records for March 1989. In addition, all industry series have been converted to 1987 Standard Industrial Classification (SIC) codes. This structure replaces the 1972 SIC coding structure previously in effect for industry estimates.

The impact of SIC restructuring was negligible at the total nonfarm and major industry division levels, but more significant in some of the detailed industries presented in this release. In particular, electronic and other electrical equipment (SIC 36), instruments and related products (SIC 38), and business services (SIC 73) were affected by sizable coverage changes due to the SIC revision.

As is the usual practice with the introduction of new benchmarks, seasonal adjustment factors have been recalculated based on the experience through May 1990. As a result, seasonally adjusted series back to January 1985 are subject to revision. BLS uses the X-11 ARIMA (Auto-Regressive Integrated Moving Average) seasonal adjustment methodology to seasonally

adjust establishment-based employment, hours, and earnings data. In June 1989, BLS began the computation of projected factors twice a year for use in seasonally adjusting establishment-based employment, hours, and earnings data. This schedule was interrupted by the timing delays in the benchmark adjustment occasioned by the incorporation of the SIC revision (which affected some 3,600 industry series). As a result, with the release of data this month, new seasonal adjustment factors for the 9-month period, August 1990 through April 1991, are being introduced. Factors for the 6-month period May-October 1991 will be computed and incorporated with the release of May 1991 estimates, reestablishing the practice of publishing 6 months of factors in advance.

A new moving-holiday extension of X-11 ARIMA was introduced in April 1990 and was used to seasonally adjust the average weekly hours series and manufacturing overtime series. Historical seasonally adjusted series have now been recomputed from January 1980 forward to incorporate this adjustment.

All unadjusted establishment data series from April 1988 forward and all seasonally adjusted series from January 1985 forward are affected by both the benchmark and SIC revisions announced today. Industry series that are affected by revisions in the SIC have been revised back to the inception of the series, to the extent possible. Also, all published constant-dollar and indexed series have been recomputed on a 1982 base, replacing the previously published 1977-based data.

The September 1990 issue of Employment and Earnings will contain a more detailed description of the effects of the benchmark and SIC revisions, seasonal adjustment methodology, and the revised seasonal adjustment factors to be used for August 1990-April 1991. That issue will also present revised estimates for all regularly published tables containing national establishment survey data on employment, hours, and earnings. All of the revised historical series, as well as historical series unaffected by the revisions, will be published in a historical bulletin, Employment, Hours, and Earnings, United States, 1909-1990. Persons wishing further explanation of these revisions may call BLS staff members on 202-523-1172.

The Employment Situation for September 1990 will be released on Friday, October 5, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonfarm payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 340,000 establishments employing over 40 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonfarm firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January–June period and again for the July–December period. For the establishment survey, updated factors for seasonal adjustment are also calculated twice a year. In both surveys, revisions to historical data are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
TOTAL									
Noninstitutional population[2]	189,296	189,783	189,901	189,296	189,326	189,467	189,607	189,783	189,901
Labor force[3]	127,132	128,527	127,952	125,758	126,543	126,643	126,466	126,384	126,300
Participation rate[4]	67.5	67.7	67.2	66.8	66.8	66.8	66.7	66.6	66.5
Total employed[5]	120,780	121,581	120,914	119,238	119,773	119,999	120,019	119,580	119,298
Employment-population ratio[6]	64.1	64.1	63.6	63.3	63.3	63.3	63.3	63.0	62.8
Resident Armed Forces	1,668	1,627	1,640	1,668	1,657	1,636	1,630	1,627	1,640
Civilian employed	119,092	119,954	119,174	117,550	118,116	118,360	118,389	117,953	117,658
Agriculture	3,633	3,573	3,473	3,275	3,133	3,305	3,348	3,086	3,137
Nonagricultural industries	115,460	116,381	115,702	114,275	114,983	115,045	115,041	114,867	114,521
Unemployed	6,352	6,946	6,837	6,520	6,770	6,663	6,447	6,814	7,003
Unemployment rate[7]	5.0	5.4	5.4	5.2	5.3	5.3	5.1	5.4	5.5
Not in labor force	61,156	61,237	62,250	62,538	62,783	62,824	63,141	63,399	63,601
Men, 16 years and over									
Noninstitutional population[2]	90,384	91,166	91,240	90,384	90,942	91,014	91,067	91,166	91,240
Labor force[3]	70,567	71,156	70,600	69,404	69,779	69,737	69,599	69,544	69,469
Participation rate[4]	78.1	78.1	77.4	76.8	76.7	76.6	76.4	76.3	76.1
Total employed[5]	67,431	67,509	67,079	65,919	66,043	66,058	66,000	65,740	65,596
Employment-population ratio[6]	74.6	74.0	73.5	72.9	72.6	72.6	72.5	72.1	71.9
Resident Armed Forces	1,519	1,462	1,475	1,519	1,496	1,472	1,466	1,462	1,475
Civilian employed	65,912	66,047	65,604	64,400	64,544	64,586	64,535	64,278	64,121
Unemployed	3,157	3,650	3,521	3,486	3,736	3,679	3,599	3,804	3,873
Unemployment rate[7]	4.5	5.1	5.0	5.0	5.4	5.3	5.2	5.5	5.6
Women, 16 years and over									
Noninstitutional population[2]	97,902	98,595	98,661	97,902	98,383	98,453	98,520	98,595	98,661
Labor force[3]	56,544	57,368	57,052	56,354	56,764	56,906	56,867	56,840	56,842
Participation rate[4]	57.8	58.2	57.8	57.6	57.7	57.8	57.7	57.7	57.6
Total employed[5]	53,349	54,072	53,735	53,319	53,729	53,941	54,019	53,839	53,702
Employment-population ratio[6]	54.5	54.8	54.5	54.5	54.6	54.8	54.8	54.6	54.4
Resident Armed Forces	199	165	165	199	158	167	165	165	166
Civilian employed	53,150	53,907	53,570	53,150	53,571	53,784	53,854	53,674	53,537
Unemployed	3,195	3,296	3,316	3,035	3,034	2,975	2,848	3,010	3,140
Unemployment rate[7]	5.7	5.7	5.8	5.4	5.3	5.2	5.0	5.3	5.5

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted				
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
TOTAL									
Civilian noninstitutional population	186,598	188,136	188,261	186,598	187,669	187,828	187,977	188,136	188,261
Civilian labor force	125,444	126,900	126,012	124,070	124,886	125,004	124,836	124,767	124,660
Participation rate	67.2	67.5	66.9	66.5	66.5	66.6	66.4	66.3	66.2
Employed	119,092	119,954	119,174	117,550	118,116	118,350	118,389	117,953	117,658
Employment-population ratio[1]	63.8	63.8	63.3	63.0	62.9	63.0	63.0	62.7	62.5
Unemployed	6,352	6,945	6,837	6,520	6,770	6,653	6,447	6,814	7,003
Unemployment rate	5.1	5.5	5.4	5.3	5.4	5.3	5.2	5.5	5.6
Men, 20 years and over									
Civilian noninstitutional population	81,754	82,790	82,862	81,754	82,487	82,581	82,676	82,790	82,862
Civilian labor force	64,167	64,863	64,773	63,717	64,251	64,312	64,364	64,344	64,362
Participation rate	78.5	78.3	78.2	77.9	77.9	77.9	77.9	77.7	77.7
Employed	61,603	61,951	61,862	60,861	61,138	61,265	61,345	61,196	61,143
Employment-population ratio[1]	75.4	74.8	74.7	74.4	74.1	74.2	74.2	73.9	73.8
Agriculture	2,529	2,486	2,435	2,340	2,258	2,388	2,400	2,262	2,246
Nonagricultural industries	59,074	59,464	59,427	58,521	58,879	58,877	58,945	58,934	58,897
Unemployed	2,564	2,912	2,910	2,856	3,113	3,047	3,019	3,148	3,219
Unemployment rate	4.0	4.5	4.5	4.5	4.8	4.7	4.7	4.9	5.0
Women, 20 years and over									
Civilian noninstitutional population	90,664	91,581	91,668	90,604	91,330	91,414	91,495	91,581	91,668
Civilian labor force	52,090	52,853	52,974	52,352	52,954	53,146	53,174	53,211	53,315
Participation rate	57.3	57.7	57.8	57.7	58.0	58.1	58.1	58.1	58.1
Employed	49,352	50,210	50,183	49,875	50,427	50,709	50,776	50,719	50,699
Employment-population ratio[1]	54.4	54.8	54.7	55.0	55.2	55.5	55.5	55.4	55.3
Agriculture	682	676	674	642	669	680	700	585	639
Nonagricultural industries	48,670	49,533	49,509	49,233	49,758	50,029	50,077	50,135	50,060
Unemployed	2,648	2,644	2,791	2,477	2,526	2,438	2,398	2,492	2,616
Unemployment rate	5.1	5.0	5.3	4.7	4.8	4.6	4.5	4.7	4.9
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,160	13,764	13,711	14,160	13,852	13,832	13,806	13,764	13,711
Civilian labor force	9,276	9,183	8,265	8,001	7,681	7,545	7,298	7,212	6,983
Participation rate	65.5	66.7	60.3	56.5	55.4	54.6	52.9	52.4	50.9
Employed	8,137	7,744	7,129	6,814	6,551	6,376	6,268	6,038	5,815
Employment-population ratio[1]	57.5	56.6	52.0	48.1	47.3	46.1	45.4	43.9	42.4
Agriculture	422	411	364	293	206	227	249	239	251
Nonagricultural industries	7,715	7,383	6,766	6,521	6,345	6,139	6,019	5,799	5,564
Unemployed	1,140	1,389	1,136	1,187	1,130	1,169	1,030	1,174	1,168
Unemployment rate	12.3	15.1	13.7	14.8	14.7	15.5	14.1	16.3	16.7

[1] Civilian employment as a percent of the civilian noninstitutional population

The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

HOUSEHOLD DATA

Table A-9. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
WHITE									
Civilian noninstitutional population	159,470	160,488	160,550	159,470	160,170	160,271	160,385	160,488	160,550
Civilian labor force	107,597	108,930	108,238	106,485	107,133	107,353	107,273	107,230	107,135
Participation rate	67.5	67.9	67.4	66.8	66.9	67.0	66.9	66.8	66.7
Employed	102,938	103,914	103,217	101,884	102,027	102,362	102,461	102,260	101,988
Employment-population ratio[2]	64.6	64.8	64.3	63.8	63.7	63.9	63.9	63.7	63.5
Unemployed	4,659	5,016	5,022	4,601	5,106	4,991	4,812	4,970	5,147
Unemployment rate	4.3	4.6	4.6	4.5	4.8	4.6	4.5	4.6	4.8
Men, 20 years and over									
Civilian labor force	55,766	56,336	56,322	55,443	55,826	55,919	55,932	55,895	56,035
Participation rate	78.8	78.8	78.7	78.4	78.3	78.3	78.3	78.1	78.3
Employed	53,868	54,219	54,149	53,307	53,425	53,578	53,650	53,576	53,613
Employment-population ratio[2]	76.2	75.8	75.6	75.4	74.9	75.1	75.1	74.9	74.9
Unemployed	1,898	2,119	2,173	2,136	2,400	2,341	2,282	2,315	2,423
Unemployment rate	3.4	3.8	3.9	3.9	4.3	4.2	4.1	4.1	4.3
Women, 20 years and over									
Civilian labor force	43,886	44,751	44,817	44,184	44,740	44,925	45,055	45,120	45,100
Participation rate	56.8	57.5	57.5	57.2	57.8	57.8	57.9	57.9	57.9
Employed	41,948	42,844	42,795	42,391	42,895	43,105	43,292	43,321	43,227
Employment-population ratio[2]	54.3	55.0	54.9	54.9	55.2	55.5	55.8	55.8	55.5
Unemployed	1,938	1,907	2,023	1,793	1,844	1,820	1,763	1,799	1,873
Unemployment rate	4.4	4.3	4.5	4.1	4.1	4.1	3.9	4.0	4.2
Both sexes, 16 to 19 years									
Civilian labor force	7,945	7,841	7,099	6,858	6,568	6,509	6,286	6,216	5,999
Participation rate	69.1	70.8	64.3	59.6	58.8	58.4	56.6	56.1	54.3
Employed	7,122	6,852	6,273	5,986	5,707	5,619	5,519	5,383	5,128
Employment-population ratio[2]	61.9	61.9	56.8	52.0	51.1	50.4	49.7	48.4	46.4
Unemployed	823	989	826	872	861	890	767	853	871
Unemployment rate	10.4	12.6	11.6	12.7	13.1	13.7	12.2	13.7	14.5
Men	10.3	13.0	12.1	13.1	13.8	14.2	12.9	15.1	15.7
Women	10.4	12.2	11.1	12.3	12.4	13.1	11.4	12.3	13.2
BLACK									
Civilian noninstitutional population	21,080	21,318	21,337	21,080	21,228	21,261	21,289	21,318	21,337
Civilian labor force	13,694	13,799	13,584	13,476	13,570	13,587	13,472	13,379	13,366
Participation rate	65.0	64.7	63.7	64.0	63.9	63.9	63.3	62.8	62.6
Employed	12,197	12,168	12,027	11,961	12,161	12,179	12,064	11,870	11,791
Employment-population ratio[2]	57.9	57.1	56.4	56.8	57.3	57.3	56.7	55.7	55.3
Unemployed	1,497	1,631	1,557	1,515	1,409	1,408	1,407	1,510	1,575
Unemployment rate	10.9	11.8	11.5	11.2	10.4	10.4	10.4	11.3	11.8
Men, 20 years and over									
Civilian labor force	6,263	6,367	6,302	6,196	6,240	6,241	6,293	6,293	6,235
Participation rate	74.7	74.7	73.9	73.9	73.7	73.5	74.0	73.9	73.1
Employed	5,686	5,707	5,678	5,584	5,651	5,672	5,702	5,617	5,572
Employment-population ratio[2]	67.8	67.0	66.6	66.6	66.8	66.8	67.1	65.9	65.4
Unemployed	578	660	624	614	589	569	591	676	663
Unemployment rate	9.2	10.4	9.9	9.9	9.4	9.1	9.4	10.7	10.6
Women, 20 years and over									
Civilian labor force	6,338	6,342	6,331	6,362	6,451	6,516	6,377	6,328	6,358
Participation rate	60.3	59.5	59.3	60.6	60.8	61.3	59.9	59.4	59.6
Employed	5,710	5,724	5,684	5,753	5,858	5,921	5,812	5,735	5,730
Employment-population ratio[2]	54.4	53.7	53.3	54.8	55.2	55.7	54.6	53.8	53.7
Unemployed	628	619	646	609	594	595	565	592	628
Unemployment rate	9.9	9.8	10.2	9.6	9.2	9.1	8.9	9.4	9.9
Both sexes, 16 to 19 years									
Civilian labor force	1,092	1,090	951	916	879	830	802	758	773
Participation rate	50.3	50.8	44.4	42.2	40.8	38.6	37.4	35.4	36.1
Employed	801	738	664	624	652	586	550	517	489
Employment-population ratio[2]	36.9	34.4	31.0	28.7	30.3	27.3	25.6	24.1	22.8
Unemployed	291	352	287	292	227	244	252	241	284
Unemployment rate	26.6	32.3	30.2	31.9	25.8	29.4	31.4	31.8	36.7
Men	24.6	32.3	30.0	30.3	27.2	31.1	37.4	32.3	38.4
Women	28.9	32.3	30.3	33.6	24.3	27.6	25.3	31.2	35.0

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,853	14,317	14,356	13,853	14,198	14,236	14,277	14,317	14,356
Civilian labor force	9,494	9,830	9,841	9,361	9,618	9,669	9,651	9,695	9,707
Participation rate	68.5	68.7	68.5	67.6	67.7	67.9	67.6	67.5	67.8
Employed	8,966	9,032	9,067	8,541	8,850	8,927	8,967	8,899	8,951
Employment-population ratio[2]	62.6	63.1	63.2	61.7	62.3	62.7	62.8	62.2	62.3
Unemployed	528	798	774	820	768	742	684	797	757
Unemployment rate	8.7	8.1	7.9	8.8	8.0	7.7	7.1	7.9	7.8

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	119,092	119,954	119,174	117,560	118,116	118,350	118,389	117,953	117,858
Married men, spouse present	40,980	40,707	40,726	40,723	40,730	40,881	40,554	40,545	40,804
Married women, spouse present	28,665	29,311	29,256	29,258	29,742	30,046	29,856	29,909	29,949
Women who maintain families	6,298	6,354	6,301	6,371	6,325	6,400	6,467	6,380	6,365
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,958	1,934	1,904	1,723	1,621	1,728	1,885	1,628	1,866
Self-employed workers	1,494	1,508	1,441	1,410	1,429	1,502	1,507	1,377	1,357
Unpaid family workers	181	132	128	133	112	101	106	96	93
Nonagricultural industries:									
Wage and salary workers	106,390	107,338	106,679	105,317	105,938	106,176	105,985	106,885	105,891
Government	16,887	17,183	17,164	17,559	17,816	18,113	17,883	17,798	17,842
Private industries	89,503	90,155	89,515	87,758	88,122	88,063	88,121	88,097	87,849
Private households	1,217	1,093	1,105	1,147	957	941	1,056	989	1,033
Other industries	88,286	89,062	88,410	86,611	87,165	87,122	87,065	87,108	86,816
Self-employed workers	8,797	8,779	8,793	8,621	8,716	8,783	8,758	8,709	8,629
Unpaid family workers	273	264	229	272	258	254	226	269	229
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,125	5,610	5,368	4,802	4,871	4,831	5,013	4,870	5,036
Slack work	2,250	2,573	2,392	2,281	2,407	2,439	2,498	2,565	2,424
Could only find part-time work	2,415	2,666	2,382	2,142	2,136	2,052	2,224	2,070	2,123
Voluntary part time	12,460	12,662	12,332	15,550	15,193	15,592	15,125	15,311	15,377
Nonagricultural industries:									
Part time for economic reasons	4,849	5,355	5,072	4,567	4,630	4,666	4,734	4,710	4,780
Slack work	2,084	2,413	2,195	2,129	2,218	2,317	2,284	2,408	2,242
Could only find part-time work	2,309	2,583	2,293	2,076	2,096	2,004	2,141	2,048	2,069
Voluntary part time	11,985	12,236	11,860	15,071	14,804	15,064	14,627	14,922	14,999

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

HOUSEHOLD DATA

Table A-6. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989			1990		1990		
	II	III	IV	I	II	June	July	Aug.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.3
U-2 Job losers as a percent of the civilian labor force	2.3	2.4	2.5	2.5	2.5	2.5	2.5	2.7
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.0	4.1	4.2	4.1	4.1	4.3	4.4
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	4.9	5.0	5.0	4.9	5.0	4.8	5.0	5.2
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.2	5.3	5.2	5.2	5.1	5.4	5.5
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.3	5.3	5.2	5.3	5.2	5.5	5.6
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.3	7.2	7.2	7.2	7.3	7.2	7.4	7.6
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	8.0	7.9	7.9	7.8	8.0	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
CHARACTERISTIC									
Total, 16 years and over	6,520	6,814	7,003	5.3	5.4	5.3	5.2	5.5	5.6
Men, 16 years and over	3,485	3,804	3,863	5.1	5.5	5.4	5.3	5.6	5.7
Men, 20 years and over	2,856	3,148	3,219	4.5	4.9	4.7	4.7	4.9	5.0
Women, 16 years and over	3,035	3,010	3,140	5.4	5.4	5.2	5.0	5.3	5.5
Women, 20 years and over	2,477	2,492	2,616	4.7	4.8	4.6	4.5	4.7	4.9
Both sexes, 16 to 19 years	1,187	1,174	1,188	14.8	14.7	15.5	14.1	16.3	16.7
Married men, spouse present	1,308	1,393	1,483	3.1	3.3	3.3	3.2	3.3	3.5
Married women, spouse present	1,175	1,085	1,205	3.9	3.5	3.5	3.7	3.5	3.9
Women who maintain families	552	594	591	8.0	7.5	7.4	8.0	8.5	8.5
Full-time workers	5,231	5,340	5,545	4.9	5.1	4.9	4.8	5.0	5.2
Part-time workers	1,284	1,493	1,459	7.1	7.1	7.4	7.6	8.1	7.9
Labor force time lost[2]	—	—	—	6.0	6.2	6.0	5.9	6.0	6.3
INDUSTRY									
Nonagricultural private wage and salary workers	4,967	5,111	5,327	5.4	5.7	5.5	5.3	5.5	5.7
Goods-producing industries	1,831	1,918	1,989	6.3	6.9	6.7	5.9	6.6	6.9
Mining	47	30	37	6.4	4.6	3.3	3.6	4.4	4.9
Construction	634	652	680	10.2	10.6	11.5	9.7	10.2	11.1
Manufacturing	1,150	1,236	1,273	5.2	5.9	5.4	4.9	5.7	5.8
Durable goods	631	725	767	4.9	5.7	5.5	4.9	5.6	5.9
Nondurable goods	519	512	505	5.7	6.3	5.2	5.0	5.7	5.6
Service-producing industries	3,136	3,193	3,338	4.9	5.1	5.0	5.0	5.0	5.2
Transportation and public utilities	240	234	266	3.7	4.3	3.2	3.0	3.7	4.1
Wholesale and retail trade	1,415	1,425	1,468	6.0	6.2	6.3	6.2	6.0	6.2
Finance and service industries	1,481	1,534	1,604	4.4	4.5	4.4	4.5	4.5	4.7
Government workers	486	511	511	2.7	2.1	2.5	2.9	2.8	2.8
Agricultural wage and salary workers	170	192	178	9.0	11.0	7.9	10.0	10.6	9.7

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
DURATION									
Less than 5 weeks	3,022	3,292	3,225	3,125	3,204	3,026	3,046	3,120	3,325
5 to 14 weeks	2,152	2,289	2,197	2,002	2,175	2,238	2,049	2,159	2,048
15 weeks and over	1,178	1,384	1,414	1,338	1,388	1,374	1,406	1,513	1,609
15 to 26 weeks	612	695	674	756	697	784	783	808	845
27 weeks and over	566	689	741	579	688	610	643	704	764
Average (mean) duration, in weeks	11.3	11.4	12.1	11.4	12.1	11.8	12.0	12.0	12.3
Median duration, in weeks	5.0	4.9	5.2	5.0	5.0	5.4	5.1	5.2	5.2
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	47.6	47.4	47.2	48.3	47.4	45.6	48.9	45.9	47.6
5 to 14 weeks	33.9	32.7	32.1	31.0	32.2	33.7	31.5	31.8	29.3
15 weeks and over	18.5	19.9	20.7	20.7	20.5	20.7	21.6	22.3	23.0
15 to 26 weeks	9.6	10.0	9.9	11.7	10.3	11.5	11.7	11.9	12.1
27 weeks and over	8.9	9.9	10.8	9.0	10.2	9.2	9.9	10.4	10.9

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
NUMBER OF UNEMPLOYED									
Job losers	2,766	2,968	3,145	2,964	3,147	3,171	3,151	3,088	3,367
On layoff	736	864	824	985	999	979	918	980	973
Other job losers	2,030	2,104	2,320	2,099	2,148	2,192	2,233	2,128	2,394
Job leavers	1,122	1,071	1,078	1,031	1,179	1,014	995	1,027	994
Reentrants	1,814	2,013	1,935	1,772	1,780	1,820	1,789	1,980	1,979
New entrants	650	893	980	843	817	983	934	887	977
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	43.5	42.7	46.0	46.2	46.8	47.4	46.7	45.7	48.7
On layoff	11.6	12.4	12.1	13.5	14.9	14.6	14.2	14.2	14.1
Other job losers	32.0	30.3	33.9	32.7	31.9	32.8	34.5	31.5	34.7
Job leavers	17.7	15.4	15.8	16.1	17.5	15.2	15.4	15.2	14.3
Reentrants	28.6	29.0	28.3	27.6	26.5	27.2	27.7	29.0	27.2
New entrants	10.2	12.9	9.9	10.0	9.2	10.2	8.3	10.2	9.8
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.2	2.3	2.5	2.4	2.5	2.5	2.5	2.5	2.7
Job leavers	.9	.8	.9	.8	.9	.8	.8	.8	.8
Reentrants	1.4	1.6	1.5	1.4	1.4	1.5	1.4	1.6	1.5
New entrants	.5	.7	.5	.5	.5	.5	.4	.5	.5

HOUSEHOLD DATA

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
Total, 16 years and over	6,520	6,814	7,003	5.3	5.4	5.3	5.2	5.5	5.6
16 to 24 years	2,437	2,316	2,387	11.0	11.2	11.0	10.3	11.0	11.5
16 to 19 years	1,187	1,174	1,188	14.8	14.7	15.5	14.1	16.3	16.7
16 to 17 years	545	457	494	17.5	17.4	20.0	16.1	17.4	19.2
18 to 19 years	623	693	653	12.8	13.0	12.8	13.4	15.2	15.0
20 to 24 years	1,250	1,142	1,219	8.8	9.3	8.5	8.2	8.3	8.8
25 years and over	4,069	4,456	4,617	4.0	4.2	4.1	4.1	4.3	4.4
25 to 54 years	3,566	3,958	4,026	4.1	4.4	4.3	4.4	4.5	4.6
55 years and over	473	494	538	3.1	3.3	3.0	2.8	3.2	3.5
Men, 16 years and over	3,485	3,804	3,863	5.1	5.5	5.4	5.3	5.8	5.7
16 to 24 years	1,330	1,279	1,253	11.5	11.8	11.2	11.1	11.8	11.8
16 to 19 years	629	656	644	15.1	15.4	16.0	15.4	17.5	17.8
16 to 17 years	295	249	287	17.7	18.1	20.6	18.4	18.4	21.5
18 to 19 years	325	387	351	13.1	13.8	13.4	14.8	16.3	15.5
20 to 24 years	701	623	609	9.4	9.8	8.6	8.9	8.5	8.5
25 years and over	2,143	2,499	2,616	3.8	4.2	4.1	4.1	4.4	4.6
25 to 54 years	1,821	2,173	2,234	3.8	4.4	4.3	4.3	4.5	4.6
55 years and over	293	321	336	3.3	3.5	3.4	3.1	3.6	3.8
Women, 16 years and over	3,035	3,010	3,140	5.4	5.4	5.2	5.0	5.3	5.5
16 to 24 years	1,107	1,037	1,134	10.4	10.5	10.7	9.3	10.4	11.4
16 to 19 years	558	518	524	14.6	13.9	14.9	12.8	14.9	15.6
16 to 17 years	250	208	207	17.2	16.7	19.4	15.9	16.4	16.6
18 to 19 years	296	306	302	12.5	12.1	12.2	11.9	13.9	14.4
20 to 24 years	549	519	610	8.1	8.7	8.4	7.5	8.0	9.3
25 years and over	1,928	1,956	2,001	4.2	4.2	4.1	4.1	4.2	4.3
25 to 54 years	1,747	1,785	1,794	4.5	4.4	4.4	4.4	4.4	4.5
55 years and over	180	173	203	2.8	2.9	2.5	2.4	2.6	3.1

[1] Unemployment as a percent of the civilian labor force

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
Civilian noninstitutional population	27,128	27,668	27,711	27,128	27,499	27,556	27,612	27,668	27,711
Civilian labor force	17,846	17,970	17,773	17,574	17,687	17,660	17,540	17,448	17,498
Participation rate	65.8	64.9	64.1	64.8	64.3	64.1	63.5	63.1	63.1
Employed	16,154	16,040	15,958	15,866	16,075	16,021	15,883	15,655	15,671
Employment-population ratio[2]	59.5	58.0	57.6	58.5	58.5	58.1	57.5	56.6	56.6
Unemployed	1,692	1,929	1,815	1,708	1,613	1,640	1,657	1,793	1,826
Unemployment rate	9.5	10.7	10.2	9.7	9.1	9.3	9.4	10.3	10.4
Not in labor force	9,282	9,698	9,938	9,554	9,812	9,896	10,072	10,220	10,213

[1] This population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns

[2] Civilian employment as a percent of the civilian noninstitutional population

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Aug. 1989	Aug. 1990	Aug. 1989	Aug. 1990	Aug. 1989	Aug. 1990
Total, 16 years and over[1]	119,092	119,174	6,352	6,857	5.1	5.4
Managerial and professional specialty	29,909	30,505	642	807	2.1	2.6
Executive, administrative, and managerial	15,024	15,112	317	364	2.1	2.4
Professional specialty	14,885	15,393	325	443	2.1	2.8
Technical, sales, and administrative support	38,679	39,244	1,494	1,881	3.9	4.4
Technicians and related support	3,735	3,782	83	134	2.2	3.4
Sales occupations	14,387	14,021	656	646	4.4	4.4
Administrative support, including clerical	18,557	18,461	753	901	3.9	4.7
Service occupations	16,052	16,222	1,104	1,105	6.4	6.4
Private household	925	824	67	36	6.7	4.1
Protective service	2,146	2,145	80	73	3.6	3.3
Service, except private household and protective	12,981	13,253	958	997	6.9	7.0
Precision production, craft, and repair	14,002	13,859	659	772	4.5	5.3
Mechanics and repairers	4,497	4,492	132	178	2.8	3.8
Construction trades	5,380	5,302	317	377	5.6	6.6
Other precision production, craft, and repair	4,145	4,085	211	217	4.8	5.1
Operators, fabricators, and laborers	18,350	18,351	1,490	1,467	7.5	7.4
Machine operators, assemblers, and inspectors	8,307	8,424	662	715	7.6	7.8
Transportation and material moving occupations	4,926	4,821	297	250	5.7	4.9
Handlers, equipment cleaners, helpers, and laborers	5,116	5,107	512	503	9.1	9.0
Construction laborers	845	878	147	148	14.8	14.2
Other handlers, equipment cleaners, helpers, and laborers	4,271	4,228	366	357	7.9	7.8
Farming, forestry, and fishing	4,100	3,993	218	223	5.1	5.3

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Aug. 1989	Aug. 1990	Aug. 1989	Aug. 1990	Aug. 1989	Aug. 1990	Aug. 1989	Aug. 1990	Aug. 1989	Aug. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,471	7,656	6,827	6,957	6,625	6,698	202	259	3.0	3.7
35 to 49 years	6,482	6,513	6,165	6,155	5,973	5,922	192	232	3.1	3.8
35 to 39 years	1,702	1,382	1,598	1,310	1,521	1,242	77	67	4.8	5.2
40 to 44 years	3,291	3,283	3,157	3,104	3,086	2,996	72	108	2.3	3.5
45 to 49 years	1,489	1,848	1,409	1,741	1,366	1,684	43	57	3.1	3.3
50 years and over	989	1,145	662	803	652	776	10	27	1.5	3.3
NONVETERANS										
Total, 35 to 49 years	16,309	17,479	15,262	16,340	14,783	15,771	480	570	3.3	3.5
35 to 39 years	7,487	8,016	7,094	7,597	6,849	7,321	245	276	3.5	3.6
40 to 44 years	4,714	5,258	4,382	4,885	4,230	4,727	152	157	3.5	3.2
45 to 49 years	4,108	4,207	3,786	3,859	3,685	3,722	101	137	2.7	3.5

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990	Aug. 1990
California									
Civilian noninstitutional population	21,518	21,961	21,999	21,518	21,834	21,877	21,918	21,961	21,999
Civilian labor force	14,678	14,965	14,940	14,574	14,677	14,801	14,801	14,751	14,816
Employed	13,994	14,115	14,126	13,899	13,881	13,998	14,073	13,995	14,010
Unemployed	684	850	813	675	796	803	728	756	806
Unemployment rate	4.7	5.7	5.4	4.6	5.4	5.4	4.9	5.1	5.4
Florida									
Civilian noninstitutional population	9,919	10,132	10,150	9,919	10,071	10,091	10,111	10,132	10,150
Civilian labor force	6,273	6,425	6,455	6,176	6,336	6,282	6,294	6,313	6,365
Employed	5,933	6,030	6,014	5,849	5,972	5,931	5,886	5,953	5,939
Unemployed	340	395	440	327	364	351	408	360	426
Unemployment rate	5.4	6.1	6.8	5.3	5.7	5.6	6.5	5.7	6.7
Illinois									
Civilian noninstitutional population	8,837	8,876	8,878	8,837	8,863	8,867	8,871	8,876	8,878
Civilian labor force	6,073	6,174	6,025	5,996	6,091	5,987	5,986	6,102	5,954
Employed	5,721	5,786	5,644	5,636	5,722	5,670	5,625	5,691	5,568
Unemployed	353	387	381	360	369	317	361	411	386
Unemployment rate	5.8	6.3	6.3	6.0	6.1	5.3	6.0	6.7	6.5
Massachusetts									
Civilian noninstitutional population	4,618	4,620	4,620	4,618	4,619	4,619	4,620	4,620	4,620
Civilian labor force	3,253	3,224	3,238	3,183	3,161	3,203	3,172	3,157	3,171
Employed	3,126	3,014	3,031	3,051	2,988	3,028	2,987	2,963	2,960
Unemployed	127	209	207	132	173	175	185	194	211
Unemployment rate	3.9	6.5	6.4	4.1	5.5	5.5	5.8	6.1	6.7
Michigan									
Civilian noninstitutional population	6,987	7,001	7,002	6,987	6,995	6,997	6,999	7,001	7,002
Civilian labor force	4,691	4,689	4,697	4,597	4,511	4,591	4,631	4,614	4,599
Employed	4,379	4,326	4,348	4,273	4,180	4,238	4,294	4,271	4,237
Unemployed	312	363	349	324	331	353	337	343	362
Unemployment rate	6.7	7.7	7.4	7.0	7.3	7.7	7.3	7.4	7.9
New Jersey									
Civilian noninstitutional population	6,032	6,028	6,028	6,032	6,028	6,028	6,028	6,028	6,028
Civilian labor force	4,012	4,134	4,104	3,974	4,002	4,012	4,037	4,073	4,066
Employed	3,842	3,922	3,915	3,798	3,805	3,820	3,845	3,879	3,872
Unemployed	170	212	189	176	197	192	192	194	194
Unemployment rate	4.2	5.1	4.6	4.4	4.9	4.8	4.8	4.8	4.8
New York									
Civilian noninstitutional population	13,804	13,802	13,801	13,804	13,799	13,800	13,801	13,802	13,801
Civilian labor force	8,727	8,874	8,731	8,588	8,709	8,775	8,732	8,686	8,586
Employed	8,306	8,415	8,311	8,152	8,286	8,328	8,287	8,222	8,155
Unemployed	421	459	420	436	423	447	445	464	431
Unemployment rate	4.8	5.2	4.8	5.1	4.9	5.1	5.1	5.3	5.0
North Carolina									
Civilian noninstitutional population	4,945	5,002	5,006	4,945	4,985	4,991	4,996	5,002	5,006
Civilian labor force	3,435	3,494	3,418	3,387	3,410	3,451	3,438	3,410	3,370
Employed	3,315	3,336	3,300	3,262	3,281	3,312	3,312	3,252	3,247
Unemployed	120	157	118	125	129	139	126	158	123
Unemployment rate	3.5	4.5	3.5	3.7	3.8	4.0	3.7	4.6	3.6
Ohio									
Civilian noninstitutional population	8,264	8,288	8,288	8,264	8,278	8,281	8,283	8,286	8,288
Civilian labor force	5,481	5,472	5,504	5,427	5,417	5,428	5,419	5,411	5,448
Employed	5,223	5,194	5,245	5,162	5,098	5,107	5,135	5,104	5,174
Unemployed	259	278	258	265	319	321	284	307	273
Unemployment rate	4.7	5.1	4.7	4.9	5.9	5.9	5.2	5.7	5.0

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Aug. 1989	July 1990	Aug. 1990	Aug. 1989	Apr 1990	May 1990	June 1990	July 1990	Aug. 1990
Pennsylvania									
Civilian noninstitutional population	9,369	9,390	9,392	9,369	9,382	9,385	9,387	9,390	9,392
Civilian labor force	5,879	5,974	5,877	5,762	5,945	5,941	5,894	5,869	5,777
Employed	5,648	5,664	5,624	5,508	5,804	5,648	5,623	5,574	5,496
Unemployed	231	310	253	254	141	293	271	296	281
Unemployment rate	3.9	5.2	4.3	4.4	5.7	4.9	4.6	5.0	4.9
Texas									
Civilian noninstitutional population	12,235	12,379	12,391	12,235	12,337	12,351	12,365	12,379	12,391
Civilian labor force	8,621	8,528	8,459	8,498	8,495	8,425	8,452	8,371	8,325
Employed	7,999	7,990	7,958	7,872	7,955	7,880	7,979	7,853	7,833
Unemployed	622	538	501	624	540	545	473	518	492
Unemployment rate	7.2	6.3	5.9	7.3	6.4	6.5	5.6	6.2	5.9

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonfarm payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1989	June 1990	July 1990p/	Aug. 1990p/	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990p/	Aug. 1990p/
Total	108,366	111,774	110,478	110,346	108,628	110,177	110.6 7	110,829	110,740	110,665
Total private	91,636	93,150	93,000	93,104	90,797	91,922	92,120	92,282	92,291	92,279
Goods-producing industries	25,804	25,474	25,348	25,451	25,356	25,180	25,191	25,162	25,100	25,008
Mining	718	748	750	749	706	734	738	744	743	736
Oil and gas extraction	390.8	412.1	415.2	413.5	387	405	408	413	412	409
Construction	5,567	5,470	5,534	5,534	5,220	5,256	5,286	5,270	5,231	5,191
General building contractors	1,422.6	1,375.5	1,386.3	1,378.6	1,345	1,338	1,334	1,334	1,319	1,304
Manufacturing	19,519	19,256	19,064	19,168	19,430	19,190	19,167	19,148	19,126	19,081
Production workers	13,324	13,090	12,917	13,030	13,263	13,046	13,025	13,007	13,006	12,963
Durable goods	11,412	11,267	11,122	11,121	11,416	11,229	11,217	11,201	11,175	11,126
Production workers	7,592	7,494	7,361	7,372	7,615	7,461	7,450	7,439	7,433	7,388
Lumber and wood products	771.8	758.4	756.6	755.7	753	750	748	743	740	738
Furniture and fixtures	522.0	514.1	501.8	510.5	525	516	516	515	512	513
Stone, clay, and glass products	578.9	567.7	561.8	561.5	568	560	559	556	552	551
Primary metal industries	771.4	760.1	750.9	755.0	772	755	756	756	758	756
Blast furnaces and basic steel products	279.6	272.2	272.0	273.0	278	271	271	270	270	272
Fabricated metal products	1,436.8	1,423.2	1,403.4	1,411.4	1,442	1,419	1,417	1,415	1,418	1,417
Industrial machinery and equipment	2,124.8	2,116.2	2,096.8	2,087.4	2,135	2,112	2,112	2,108	2,103	2,098
Electronic and other electrical equipment	1,752.4	1,706.1	1,684.5	1,680.7	1,750	1,715	1,711	1,703	1,693	1,679
Transportation equipment	2,032.3	2,031.4	1,991.8	1,977.7	2,056	2,014	2,010	2,021	2,016	2,000
Motor vehicles and equipment	846.9	836.5	804.8	797.5	864	820	817	826	825	813
Instruments and related products	1,029.3	1,003.2	996.9	994.8	1,027	1,005	1,002	1,000	997	992
Miscellaneous manufacturing	392.2	386.9	377.4	385.9	388	385	387	384	386	382
Nondurable goods	8,107	7,989	7,942	8,047	8,014	7,961	7,950	7,947	7,951	7,955
Production workers	5,732	5,596	5,556	5,658	5,648	5,585	5,573	5,568	5,573	5,575
Food and kindred products	1,729.6	1,644.5	1,686.1	1,731.2	1,649	1,651	1,650	1,643	1,647	1,650
Tobacco products	48.4	43.6	43.6	48.0	49	46	46	47	46	48
Textile mill products	726.6	706.0	692.8	704.8	724	708	703	702	703	703
Apparel and other textile products	1,074.8	1,038.6	997.7	1,026.2	1,075	1,036	1,031	1,029	1,027	1,026
Paper and allied products	703.9	705.7	704.7	705.8	700	699	698	699	701	702
Printing and publishing	1,561.1	1,584.7	1,576.3	1,578.3	1,566	1,579	1,581	1,582	1,581	1,583
Chemicals and allied products	1,083.3	1,094.7	1,091.4	1,091.5	1,076	1,084	1,085	1,086	1,085	1,084
Petroleum and coal products	160.6	163.1	163.7	164.3	157	159	159	160	160	161
Rubber and misc. plastics products	880.8	877.8	864.6	871.0	883	869	868	871	874	874
Leather and leather products	137.5	129.9	121.3	126.5	135	130	129	128	127	124
Service-producing industries	82,562	86,300	85,130	84,895	83,272	84,997	85,426	85,667	85,640	85,657
Transportation and public utilities	5,566	5,881	5,842	5,854	5,561	5,809	5,833	5,846	5,840	5,849
Transportation	3,453	3,649	3,607	3,615	3,467	3,588	3,613	3,627	3,625	3,630
Communications and public utilities	2,113	2,232	2,235	2,239	2,094	2,221	2,220	2,219	2,215	2,219
Wholesale trade	6,527	6,620	6,617	6,616	6,296	6,363	6,369	6,383	6,377	6,383
Durable goods	3,749	3,798	3,794	3,789	3,734	3,771	3,770	3,779	3,775	3,774
Nondurable goods	2,578	2,622	2,623	2,627	2,560	2,592	2,599	2,604	2,602	2,609
Retail trade	19,765	19,981	19,966	19,950	19,620	19,778	19,795	19,822	19,847	19,831
General merchandise stores	2,481.9	2,438.3	2,455.7	2,435.7	2,537	2,493	2,487	2,496	2,496	2,490
Food stores	3,210.2	3,308.9	3,313.5	3,299.7	3,205	3,287	3,295	3,302	3,304	3,296
Automotive dealers and service stations	2,131.7	2,141.7	2,154.4	2,159.1	2,106	2,118	2,121	2,120	2,129	2,133
Eating and drinking places	6,652.9	6,803.0	6,783.8	6,805.2	6,464	6,573	6,583	6,598	6,618	6,613
Finance, insurance, and real estate	6,821	6,915	6,937	6,955	6,740	6,825	6,838	6,846	6,843	6,852
Finance	3,334	3,364	3,367	3,365	3,312	3,356	3,338	3,344	3,337	3,342
Insurance	2,116	2,152	2,159	2,161	2,109	2,135	2,139	2,143	2,148	2,155
Real estate	1,371	1,399	1,411	1,409	1,319	1,352	1,361	1,357	1,358	1,355
Services	27,373	28,479	28,510	28,498	27,226	27,969	28,094	28,225	28,284	28,356
Business services	5,005.1	5,090.0	5,081.9	5,107.4	4,950	5,026	5,048	5,060	5,052	5,052
Health services	7,627.8	8,128.8	8,175.5	8,201.3	7,605	7,984	8,040	8,096	8,133	8,177
Government	16,730	18,624	17,478	17,242	17,831	18,255	18,497	18,567	18,449	18,396
Federal	3,011	3,365	3,197	3,053	2,996	3,151	3,346	3,338	3,161	3,058
State	3,963	4,171	4,082	4,098	4,191	4,252	4,262	4,296	4,310	4,332
Local	9,756	11,088	10,199	10,091	10,644	10,852	10,889	10,915	10,978	11,006

p/ = preliminary.

NOTE: Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) system, and updated seasonal adjustment factors.

Note on temporary census workers

The number of temporary workers associated with the 1990 census has an impact on the employment levels for the Federal government, as well as for higher aggregates. The estimate of these workers was 22,000 in January, 27,000 in February, 117,000 in March, 178,000 in April, 378,000 in May, 367,000 in June, and 194,000 in July. For August, the estimated number (preliminary) was 74,000, which may be subject to significant revision.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1989	June 1990	July 1990p/	Aug. 1990p/	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990p/	Aug. 1990p/
Total private	34.9	34.8	34.9	34.8	34.5	34.5	34.5	34.7	34.5	34.5
Mining	43.5	44.4	43.6	44.0	43.4	43.4	43.6	44.4	43.7	43.9
Construction	38.9	39.1	38.3	39.0	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.9	41.1	40.5	40.9	41.0	40.7	40.9	41.0	40.9	41.0
Overtime hours	3.8	3.8	3.6	3.9	3.8	3.5	3.8	3.8	3.8	3.9
Durable goods	41.3	41.7	41.0	41.3	41.4	41.2	41.5	41.6	41.6	41.6
Overtime hours	3.9	3.9	3.7	4.0	3.9	3.9	3.9	3.9	3.9	4.0
Lumber and wood products	40.4	40.8	40.8	40.6	40.1	40.2	40.4	40.3	40.2	40.4
Furniture and fixtures	39.7	39.2	38.8	39.4	39.5	39.0	39.2	39.3	39.5	39.2
Stone, clay, and glass products	42.9	42.7	42.1	42.7	42.5	42.0	42.1	42.3	41.8	42.3
Primary metal industries	42.4	43.2	42.8	42.5	42.8	41.8	43.0	43.0	43.1	42.9
Blast furnaces and basic steel products	43.0	43.8	44.1	43.3	43.3	42.9	43.9	43.3	44.1	43.6
Fabricated metal products	41.2	41.8	41.8	41.5	41.5	41.2	41.7	41.6	41.8	41.6
Industrial machinery and equipment	41.8	42.1	41.7	41.5	42.3	41.8	42.1	42.0	42.1	42.0
Electronic and other electrical equipment	40.8	41.0	40.2	40.6	41.0	40.9	40.9	41.0	40.8	40.8
Transportation equipment	41.8	42.8	41.9	42.3	42.5	41.9	42.5	42.6	42.6	43.1
Motor vehicles and equipment	41.6	44.0	42.3	42.8	42.8	41.8	43.4	43.7	43.6	44.1
Instruments and related products	40.7	41.2	40.7	40.8	41.0	41.2	41.1	41.2	41.3	41.2
Miscellaneous manufacturing	39.2	39.5	38.7	39.2	39.4	39.2	39.4	39.4	39.4	39.4
Nondurable goods	40.3	40.3	39.8	40.1	40.2	40.0	40.1	40.3	40.1	40.2
Overtime hours	3.8	3.6	3.6	3.9	3.8	3.4	3.6	3.6	3.6	3.7
Food and kindred products	41.2	40.9	40.7	41.6	40.7	40.4	40.8	40.9	40.6	41.1
Tobacco products	37.3	39.5	38.5	38.8	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.3	40.6	39.6	40.3	41.0	40.0	40.2	40.4	40.1	40.0
Apparel and other textile products	37.0	36.9	36.3	36.7	36.9	36.4	36.6	36.7	36.6	36.6
Paper and allied products	43.2	43.4	43.2	43.4	43.5	43.1	43.3	43.5	43.5	43.7
Printing and publishing	37.9	37.6	37.6	38.2	37.8	37.8	37.9	38.0	37.9	38.1
Chemicals and allied products	42.1	42.6	42.0	42.2	42.4	42.6	42.6	42.4	42.3	42.5
Petroleum and coal products	43.0	44.8	44.2	43.7	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.0	41.7	40.9	40.9	41.2	40.9	41.4	41.6	41.5	41.1
Leather and leather products	38.4	38.2	37.3	37.9	38.1	37.5	37.4	37.5	37.3	37.6
Transportation and public utilities	38.9	39.4	39.4	39.4	38.6	39.0	39.1	39.2	39.0	39.1
Wholesale trade	38.9	38.2	38.3	38.9	38.8	38.1	38.0	38.1	38.1	38.0
Retail trade	29.6	29.3	29.7	29.6	28.9	29.0	29.0	29.0	28.9	28.7
Finance, insurance, and real estate	35.8	35.8	36.2	35.7	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.8	32.7	33.0	32.9	32.5	32.6	32.5	32.6	32.6	32.6

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonfarm payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

NOTE: Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) system, and updated seasonal adjustment factors.

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Aug. 1989	June 1990	July 1990p/	Aug. 1990p/	Aug. 1989	June 1990	July 1990p/	Aug. 1990p/
Total private	9.61	9.98	$10.00	9.99	$335.39	$347.30	$349.00	$347.65
Seasonally adjusted	9.70	10.05	10.07	10.09	334.65	348.04	347.42	348.11
Mining	13.22	13.66	13.63	13.59	575.07	606.50	595.14	597.96
Construction	13.31	13.63	13.70	13.74	525.54	532.93	524.71	535.86
Manufacturing	10.46	10.85	10.88	10.84	427.81	445.94	448.64	443.36
Durable goods	10.99	11.37	11.38	11.38	453.89	474.13	466.58	469.99
Lumber and wood products	8.98	9.09	9.17	9.16	359.56	370.87	366.80	371.98
Furniture and fixtures	8.10	8.52	8.52	8.58	329.51	333.98	330.58	338.05
Stone, clay, and glass products	10.85	11.17	11.20	11.19	465.47	476.96	471.52	477.41
Primary metal industries	12.42	12.98	13.03	12.91	526.61	557.28	557.68	548.68
Blast furnaces and basic steel products	14.29	14.76	14.92	14.76	614.47	645.61	657.97	639.11
Fabricated metal products	10.54	10.85	10.86	10.87	436.25	453.53	449.26	448.93
Industrial machinery and equipment	11.57	11.75	11.78	11.82	475.27	494.68	491.23	490.53
Electronic and other electrical equipment	10.96	10.27	10.34	10.34	410.45	421.07	415.67	419.80
Transportation equipment	13.67	14.20	14.04	14.13	571.41	607.76	588.28	598.55
Motor vehicles and equipment	14.16	14.85	14.56	14.68	589.06	653.40	615.89	628.30
Instruments and related products	10.90	11.27	11.36	11.32	443.63	464.32	462.35	461.86
Miscellaneous manufacturing	8.20	8.61	8.61	8.64	321.44	340.19	333.21	338.69
Nondurable goods	9.73	10.12	10.19	10.12	392.12	407.84	405.56	407.84
Food and kindred products	9.32	9.67	9.67	9.51	383.98	395.30	393.57	393.62
Tobacco products	15.72	17.24	17.48	16.10	586.36	680.98	672.98	611.80
Textile mill products	7.68	8.02	8.01	8.05	317.18	323.61	317.20	324.42
Apparel and other textile products	6.35	6.61	6.57	6.63	234.21	243.91	238.49	243.32
Paper and allied products	11.95	12.23	12.35	12.30	516.24	530.78	533.52	533.82
Printing and publishing	10.91	11.16	11.26	11.30	413.49	419.62	425.38	431.66
Chemicals and allied products	13.18	13.51	13.59	13.56	551.31	575.53	570.78	572.23
Petroleum and coal products	15.28	16.23	16.23	15.77	665.76	759.56	717.37	689.15
Rubber and misc. plastics products	9.47	9.77	9.87	9.84	388.27	407.41	403.68	402.44
Leather and leather products	6.55	6.91	6.79	6.89	251.52	263.96	253.27	261.13
Transportation and public utilities	12.61	12.86	12.96	12.95	498.53	506.68	510.62	510.23
Wholesale trade	10.36	10.76	10.83	10.75	395.68	411.03	414.79	408.50
Retail trade	6.49	6.73	6.74	6.75	192.10	197.78	200.18	198.45
Finance, insurance, and real estate	9.47	9.98	10.00	9.93	339.03	354.42	362.00	354.58
Services	9.38	9.75	9.78	9.76	305.04	318.83	322.74	321.10

1/ See footnote 1, table B-2.
p = preliminary.
NOTE: Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) system, and updated seasonal adjustment factors.

ESTABLISHMENT DATA

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonfarm payrolls by industry, seasonally adjusted

Industry	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990p/	Aug. 1990p/	Percent change from: July 1990-Aug. 1990
Total private:							
Current dollars	$9.72	$9.96	$9.98	$10.03	$10.07	$10.09	0.2
Constant (1982) dollars2/	7.64	7.57	7.58	7.58	7.58	N.A.	(3)
Mining	13.30	13.59	13.58	13.73	13.75	13.69	-.4
Construction	13.55	13.62	13.71	13.73	13.76	13.78	.1
Manufacturing	10.57	10.75	10.81	10.86	10.89	10.92	.3
Excluding overtime4/	10.07	10.24	10.33	10.38	10.40	10.41	.1
Transportation and public utilities	12.65	12.96	12.88	12.92	12.99	12.99	0
Wholesale trade	10.42	10.76	10.76	10.80	10.85	10.81	-.4
Retail trade	6.56	6.76	6.76	6.78	6.79	6.82	.4
Finance, insurance, and real estate	9.56	9.88	9.87	9.98	10.08	10.03	-.5
Services	9.46	9.79	9.80	9.85	9.91	9.91	0

1/ See footnote 1, table B-2.
2/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.
3/ Change was 0.2 percent from June 1990 to July 1990, the latest month available.
4/ Derived by assuming that overtime hours are paid at the rate of time and one-half.
N.A. = not available.
p/ = preliminary.
NOTE: Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) System, and updated seasonal adjustment factors.

ESTABLISHMENT DATA

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonfarm payrolls by industry

(1982=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1989	June 1990	July 1990p/	Aug. 1990p/	Aug. 1989	Apr. 1990	May 1990	June 1990	July 1990p/	Aug. 1990p/
Total private	125.3	127.1	127.2	127.1	122.8	124.2	124.6	125.3	124.8	124.6
Goods-producing industries	115.2	113.9	111.3	113.2	112.4	110.1	111.2	111.7	110.5	110.5
Mining	65.8	68.3	67.2	67.5	62.4	65.2	65.9	68.0	66.7	65.9
Construction	155.8	152.2	151.5	153.9	141.8	138.6	142.1	144.3	138.5	139.6
Manufacturing	109.8	108.6	105.5	107.4	109.6	107.0	107.5	107.6	107.4	107.2
Durable goods	108.6	108.4	104.7	105.6	109.7	106.5	107.3	107.1	107.2	106.5
Lumber and wood products	137.0	135.2	132.2	134.1	132.2	131.7	131.9	130.5	129.7	129.7
Furniture and fixtures	129.8	125.3	120.7	124.9	130.1	125.4	125.7	126.6	125.8	126.8
Stone, clay, and glass products	117.7	114.5	111.2	112.8	113.9	110.7	110.5	110.5	108.2	109.2
Primary metal industries	96.6	96.7	92.4	92.2	95.5	90.9	93.5	93.5	94.3	93.2
Blast furnaces and basic steel products	83.1	82.1	80.4	81.0	83.2	80.1	81.2	80.6	81.9	81.0
Fabricated metal products	108.7	109.1	105.1	106.9	110.1	107.2	108.5	107.8	108.6	108.0
Industrial machinery and equipment	98.4	99.1	96.5	95.6	100.6	98.2	98.9	98.4	98.5	97.7
Electronic and other electrical equipment	111.8	109.7	105.3	106.6	112.6	109.7	109.5	109.6	108.2	107.3
Transportation equipment	121.4	125.0	118.7	119.0	126.2	120.2	121.8	123.3	124.3	123.8
Motor vehicles and equipment	130.8	136.6	125.0	125.3	138.4	126.7	131.2	133.7	133.2	134.3
Instruments and related products	88.7	87.5	85.3	85.8	89.2	88.4	87.7	87.2	87.0	86.5
Miscellaneous manufacturing	105.7	104.0	98.9	103.5	105.3	102.9	104.2	102.7	103.8	102.7
Nondurable goods	111.4	108.8	106.7	110.0	109.4	107.6	107.9	108.2	107.7	108.1
Food and kindred products	116.7	108.5	111.7	118.5	108.2	108.7	109.2	108.7	108.3	110.0
Tobacco products	66.3	61.3	59.2	65.9	67.2	64.7	65.8	64.3	66.3	66.4
Textile mill products	107.6	102.4	97.6	101.1	106.6	101.2	100.9	101.2	100.5	99.9
Apparel and other textile products	98.4	94.4	88.7	92.6	98.2	92.9	92.9	93.0	92.5	92.5
Paper and allied products	111.0	112.2	111.4	112.4	110.9	110.8	110.4	111.4	111.6	112.5
Printing and publishing	126.2	127.5	126.6	129.1	126.6	127.6	128.1	128.6	128.4	129.4
Chemicals and allied products	105.0	105.4	103.7	103.8	104.8	104.6	104.6	104.4	103.9	103.7
Petroleum and coal products	88.2	95.9	90.8	90.0	86.1	88.0	88.0	93.0	87.6	87.9
Rubber and misc. plastics products	127.1	128.4	123.5	124.9	128.3	124.6	126.0	127.3	127.4	126.2
Leather and leather products	67.6	63.0	57.3	60.8	65.5	62.2	61.5	61.1	59.6	59.5
Service-producing industries	129.9	133.0	134.3	133.3	127.5	130.5	130.6	131.4	131.2	131.0
Transportation and public utilities	110.3	117.8	117.0	117.2	109.2	115.2	116.0	116.7	115.8	116.1
Wholesale trade	118.8	121.1	121.2	120.3	118.0	119.3	118.9	119.8	119.6	119.3
Retail trade	127.5	127.5	129.2	127.7	125.7	125.0	125.1	125.3	125.0	125.9
Finance, insurance, and real estate	122.6	124.3	124.4	124.4	120.7	122.6	122.5	122.9	123.1	123.0
Services	142.6	147.4	149.0	148.3	140.4	144.4	144.4	145.8	145.9	146.2

1/ See footnote 1, table B-2.

p = preliminary.

NOTE: Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) system, and updated seasonal adjustment factors. In addition, the base year for the indexes has been changed to 1982=100.

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 356 industries1/											
Over 1-month span:												
1989	64.5	58.7	58.0	57.8	59.6	57.3	59.8	57.7	50.0	55.2	59.6	56.6
1990	55.6	58.6	53.7	49.9	55.8	49.9	p/50.4	p/46.9				
Over 3-month span:												
1989	65.3	64.2	60.0	60.1	59.7	58.3	59.7	54.5	55.2	55.8	57.7	60.3
1990	58.4	56.7	54.8	53.1	53.7	p/54.6	p/51.3					
Over 6-month span:												
1989	67.6	65.4	65.0	61.0	61.2	58.7	57.0	58.1	56.2	58.3	57.4	58.6
1990	57.3	56.5	55.5	p/54.4	p/50.8							
Over 12-month span:												
1989	67.1	67.7	65.3	64.x	64.9	61.2	60.0	59.8	58.6	57.3	56.7	56.0
1990	p/54.1	p/54.2										
	Manufacturing payrolls, 139 industries1/											
Over 1-month span:												
1989	60.4	48.6	50.4	47.1	45.3	45.7	45.0	45.7	34.2	48.6	43.5	48.2
1990	42.4	45.7	45.3	46.8	45.7	40.3	p/46.8	p/41.4				
Over 3-month span:												
1989	54.0	54.7	45.3	43.9	43.2	42.8	41.7	33.1	36.3	34.9	41.7	39.2
1990	40.3	37.1	44.2	41.4	40.6	p/42.8	p/40.6					
Over 6-month span:												
1989	56.5	49.6	49.3	43.5	42.1	37.1	36.7	34.9	34.2	35.3	33.1	36.0
1990	37.1	35.6	36.3	p/41.0	p/37.4							
Over 12-month span:												
1989	53.6	55.0	49.3	45.3	43.9	39.9	37.1	35.6	33.8	32.4	30.9	31.7
1990	p/30.2	p/32.0										

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p = preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment. Data have been revised to reflect March 1989 benchmarks, conversion to the 1987 Standard Industrial Classification (SIC) system, and updated seasonal adjustment factors.

Representative SCHEUER. Thank you very much.

I'm going to suspend for just a couple of minutes for an emergency phone call I must make.

[Brief suspension.]

Representative SCHEUER. Well, you have given us some very disquieting figures, and I'm sure you feel somewhat disquieted yourself, Commissioner.

Given the trends that you have outlined to us, do you have enough statistical data to determine whether our economy is in a recession?

Mrs. NORWOOD. I don't think you can read the definition of a recession into the data we have released today for several reasons.

First of all, there is still some job growth in the service-producing sector in particular in health industries and State and local governments.

Representative SCHEUER. Can I ask you about that 105,000 people more employed in health. Does that mean we are delivering health services, or does that just mean we are adding more manpower in a health service delivery system that is already by far the most inefficient and least productive in the developed world?

Mrs. NORWOOD. You left out one word, "expensive."

Representative SCHEUER. Pardon.

Mrs. NORWOOD. More expensive as well.

Representative SCHEUER. More expensive, yes. As you are well aware, we spend about 12 percent of GNP on health.

Mrs. NORWOOD. Yes.

Representative SCHEUER. That's 50 percent more than the average of the OECD countries, 50 percent more than the developed countries. Japan spends about 6 percent, just half of the percentage of its GNP for health services, and it has significantly better statistically identifiable health outputs in terms of life expectancy at birth, infant mortality, and a whole range of statistical indexes.

So when you say we have added 105,000 people to the Federal, State, city, and county health rolls, what does that mean to us? I'll point out to you that Sweden has about 1.3 employees per hospital bed and we have about 4.3, as I recall, and there is absolutely no indication that Swedish hospitals are less health enhancing or not as safe as our hospitals, but we have an enormously greater expenditure of labor per hospital bed.

So what I'm trying to get from you, and I don't want to belabor the point, what does this 100,000-plus increase in health services delivered at the Federal, State, county, and municipal level mean to us?

Mrs. NORWOOD. I think what you have raised is a very complex set of problems about the delivery of health care. All that I can tell you from our data today is that approximately 45,000 people were added to the health industry, and that is across the board. That tends to coincide with State and local government, some of which could have been in municipal health facilities, but many of which may have been in other kinds of municipal activities like police and like education.

Representative SCHEUER. So that 100,000 figure is not an accurate one. It's misleading. We didn't add 100,000 people to the health services industry?

Mrs. NORWOOD. No, 45,000 to the health services, and the rest were in State and local government in a variety of different kinds of municipal services.

The population is getting older and is living longer in this country than it did before, and it's not unusual, it seems to me, for us to be expanding some of the health care facilities.

But I think what you've done is to raise a very interesting question and a very serious question about the condition of our health care industry and about the very high proportion of our GNP that goes into health care expenditures. We at the Bureau of Labor Statistics, who after all only measure these things, are trying our best to come up with some better measures of things like the prices of hospital services so that we can be of more assistance to you in the Congress who have to make decisions about that.

To get back to your original question about recession, clearly the data that we have released today show a great deal of weakness, particularly in the goods-producing sector, and if we only were to look at that, you would have a very, very stark picture. But for many months we have had an economy where the service-producing sector has been building up jobs even as we have been losing them in manufacturing and construction.

What we are seeing now, I think, is a slowing down to a very great degree this counterbalancing force that we've had in services, and therefore we'll have to look very carefully in the next couple of months about this.

As for a recession, the technical definition of a recession, which is defined by the National Bureau of Economic Research, usually is based upon looking at a whole set of data and not just the employment data, and looking at them in three dimensions. First, they consider the depth of the plunge downward, and clearly we're about flat this month, that is the month of August. Second, they consider the dispersion, or how broad based a decline is, and I would say that the deep reductions in employment generally have been restricted to manufacturing and construction, and not yet in services, though services are slowing down a great deal. The last dimension is the duration of these reductions, and we are seeing the beginning of this.

So I think this is the kind of question that needs to be asked several months from now.

Representative SCHEUER. Don't we also have to fine tune our thinking on services? Services could be highly skilled and professional services delivered by bankers, accountants, computer experts and what-not, or it could be kids flipping hamburgers at McDonald's, Wendy's, or Burger King Restaurants.

Mrs. NORWOOD. Yes, and you and I are delivering services, too.

Representative SCHEUER. Well, I hope we are. [Laughter.]

Every 2 years there are some people who judge whether I've been delivering an adequate level of services or not, and that accounting period is coming up very fast in the next couple of months.

Is the growth of services composed mostly of high-level skilled jobs in accounting, financial services, communications, and all that, or is it the kids flipping hamburgers at Wendy's, Burger King, or McDonald's Restaurants?

Mrs. NORWOOD. We've had really both kinds of jobs. In many of the health services there are professional people, physicians, and technical people, but many of them are nurses aides and orderlies or custodians in nursing homes who have very little training and they are paid rather low wages.

The retail-trade sector, which has not been doing very well and has been quite weak, is a sector that has been growing fast in the past until recently. Retail trade tends on average to have rather low-paying jobs, but some of the jobs there, managers, for example, in retail-trade industries do much better. So it depends on what the occupational mix is within the industry.

Finance, insurance, and real estate, which are also in the services-producing sector, tend to be jobs requiring a little bit more training, more cognitive abilities and they are higher paid. So you have this mixture within the service-producing sector.

Representative SCHEUER. All right. Let's change our focus to the current headlines flowing from the Iraqi crisis, the Middle East buildup and so forth.

In your view, Mrs. Norwood—and let's get into some crystal ball gazing—what effect will the Iraqi oil crisis have on the inflation rate for the rest of this year and when will it start showing up in the inflation figures? In other words, the vast moneys that we have built up so extremely rapidly over a period of a month or two, when will they be reflected in the inflation rate and in the inflation figures that you produce?

Mrs. NORWOOD. That apparently simple question sets out a lot of complex issues. We do know that because of the Middle East crisis there will be problems in the delivery of oil and that as crude oil becomes more difficult to get and more expensive, that there could well be a big increase in the price of finished petroleum products, including gasoline.

If that were to happen or when that happens, and some of it has already taken place, we certainly will see that in our price indexes. A 10-percent change in the price of gasoline, for example, at the retail gas pump translates into about a four-tenths percent rise in the CPI.

Representative SCHEUER. Four-tenths percent, almost a half a percent.

Mrs. NORWOOD. That's right. That's gasoline and fuel oil.

Representative SCHEUER. Yes.

Mrs. NORWOOD. And in the producer price index we have a number of finished petroleum products that also will translate into slightly different but similar types of increases. But that's just the direct effect of this.

Then, you find that industries in the United States which use petroleum will be paying higher prices, and so you will have a more indirect effect that actually begins to be pervasive through the entire economy. The indirect effect would be about as large as the direct effect.

But then there are a whole series of other kinds of issues. There is a great deal of money being spent to support the Armed Forces in the Middle East, and we don't know yet how that is going to be financed and whether that financing will be expansionary or not.

We don't even know whether we are going to have budget decisions by the beginning of the fiscal year.

So there are a whole lot of issues there that need to be addressed when we are looking at the inflationary effects of this, but it is something that we need to track, and we are trying very carefully to see what happens.

Part of the problem with this is the timing of our data collection and the timing of price changes. So, we may have an index that shows a price increase, and then there may be a decline the following week, which would not be picked up until the following month's index. We will try our best to emphasize in all of our price releases, the timing of our collection and its effect on the data.

Representative SCHEUER. Well, let me just ask you one more question on the question of timing. Do the current prices for gasoline and heating oil fully reflect the rise in the price of crude oil that has taken place in the last 30 days, let us say since mid-August, or can the consumers of America fully expect further price increases?

Mrs. NORWOOD. Well, that would depend, I would assume, on the regularity of the supply of crude oil which isn't yet quite clear.

Perhaps Mr. Dalton has something further to add to that.

Mr. DALTON. Well, in a limited technical way I can say that the latest information we have published is for July, and that information reflects price levels before the Middle East hostilities began.

Mrs. NORWOOD. It will be a month or two.

Mr. DALTON. In terms of the information that we have published, they do not reflect the increases in prices that have subsequently taken place.

Mrs. NORWOOD. But next week we will be putting out a producer price index and the week after consumer price index for the month of August. So we should have August prices, and to the extent that price increases occurred in August, they will be reflected in those indexes.

Representative SCHEUER. All right. Let's go back now to the question of the labor market for young workers.

You tell us that the labor force participation rate for young people this summer went down about 2.3 points from the summer of 1989. How do you explain that and how do you explain the 6-percent decline in the percentage of black youths who were looking for work this summer? And why would there be a record 16-point gap between the labor force participation rates of black youths and white youths for this summer, that you yourself have pointed out?

Mrs. NORWOOD. There has always been a gap in the participation rates of black and white youth. Another way of looking at this situation is to focus on the employment-population ratio, the proportion of the youth population that has a job. I think that statistic is a somewhat better measure for this purpose because it includes the effect of both labor force activity and unemployment.

The employment-population ratio for white young people has been for a long time very much higher than for the black youth population.

What is happening now is I think two things together. One is that the size of the youth population as a whole is declining. The other is that fewer young people seem to be participating, as you

say, in the labor force. Now one can ask why. I don't know the answer to that. I can surmise that since so many of these youngsters work in the retail-trade industry or in other services establishments, and since those two industries have slowed their employment growth enormously in recent months, that there are fewer jobs there for them. I don't have concrete evidence of that, but I believe that that may be a good explanation.

There is also the question of the regional changes that are going on. We think that probably the Southwest is faring somewhat better than, for example, the Northeast, which has been suffering a good bit, and we have a lot of disadvantaged youth in the Northeast in this country.

Representative SCHEUER. So, you would characterize the job market for young people this summer as weak?

Mrs. NORWOOD. Very, very weak, yes, very discouraging.

Representative SCHEUER. Would you care to comment on what we might do as a society to remedy that in future years, or would you rather duck that one?

Mrs. NORWOOD. It's not a question of ducking it. I think we all would like to feel that we knew what to do. It's quite clear to me as I look at the data, without getting into policy issues, but the data suggest to me that we are developing what many economists have called an underclass that is becoming quite resistant to change, and that is a very, very worrying thing. It seems to be related to the availability of jobs, to the kind of training that these people have received, and to their educational preparation, as well as I believe very strongly, too, their home and family situations.

I believe that if you have young people growing up in families in poverty under terrible conditions, that they grow up without much hope and without much drive for improvement, and it is very difficult to expect them suddenly, if you present them with an opportunity to learn, having had this background, to take advantage of that. So I think we have very serious problems there.

Representative SCHEUER. Are you familiar with the report that was issued last June by the Commission on the Skills of the American Work Force? This was funded and organized by the Carnegie Foundation and it was cochaired by former Labor Secretaries Bill Brock and Ray Marshall.

Mrs. NORWOOD. Yes.

Representative SCHEUER. Are you familiar with that report?

Mrs. NORWOOD. Yes. I haven't gone through it in detail, but I have had many discussions with the people who were involved in developing it.

Representative SCHEUER. Well, maybe the next time you come here we'll have some more detailed discussions of it.

Mrs. NORWOOD. All right. I would be glad to go into it in greater detail.

Representative SCHEUER. I would appreciate that very much, and I think that would be very useful.

The commission analyzed the education and training systems of the United States and six competitor nations—Denmark, Germany, Ireland, Japan, Singapore, and Sweden—and issued a broad range of recommendations calling for changes both in attitudes and in or-

ganizations in order to move toward a high-wage, high-value-added economy.

One of the things that they emphasized was the painfully inadequate way that our country addressed itself to the needs of non-college-bound youth, that 70 percent of the population that is probably not going to finish college. They may get some postsecondary education of one kind or another.

They make a very good case that the way these other countries, and in fact the way almost all developed countries, perceive of their non-college-bound youth as a real asset to be nurtured and holding a great potential contribution to society really beggars us and puts us to shame.

They point out that the transition between the world of study and the world of work is made a very easy, almost automatic and pleasant and agreeable one with all kinds of interfacing between secondary schools and the world of work, services, and production. They mention that production people, plant managers, department store heads will come to the school system and work for 6 months, and then the folks involved in the vocational education programs will go to the plant or the department store for 6 months. So they are constantly honing their skills and producing programs in school that are designed to meet the needs of the corporate culture out there into which these kids supposedly will transition.

I don't want to burden you with having to discuss matters today that are a little bit outside of your orbit, but perhaps the next time we meet I'll ask you to address yourselves to that and perhaps give us some recommendations as to the kind of changes we should make in our education system and our transition system from school to work that will reverse some of those discouraging trends that you've outlined this morning.

Mrs. NORWOOD. It is certainly a very fascinating subject, and I will look at that report more carefully.

Mr. Plewes could tell you now a little bit about what we are doing to help the commission that Secretary Dole has set up within the Department of Labor on improving skills.

Representative SCHEUER. I would like to hear that very much.

Mr. PLEWES. That is a special group that is on going now, and one that is again headed by Mr. Brock. They are looking at——

Representative SCHEUER. By former Secretary Bill Brock?

Mrs. NORWOOD. Yes.

Representative SCHEUER. He is an outstanding able fellow.

Mrs. NORWOOD. Oh, yes.

Representative SCHEUER. He has testified several times before the Joint Economic Committee, and he is really an adornment to our society and to the Republican Party. He just has a superb potential to contribute in this very agonizing and frustrating area.

Mrs. NORWOOD. Yes. We served with him in the Department of Labor, and we can certainly agree with you about his ability.

Representative SCHEUER. He is quite terrific.

Mr. PLEWES. They are taking a look at a more narrow question, but a very important one, and that is: Are we training for the right skills in our educational system? You've mentioned some of the things that we may not be doing and we may not be identifying carefully enough.

Representative SCHEUER. Are we producing buggy-whip makers?

Mr. PLEWES. That's correct, sir.

Representative SCHEUER. Are we producing a whole generation of kids trained to make Stanley steamers?

Mr. PLEWES. Well, that is what this commission is looking at, and we are cooperating with them. We will be furnishing them statistical information and helping them understand at least the way in which we look at jobs and the way in which the educational system looks at jobs.

I can tell you now that there is a tremendous disconnect between just the way we talk about jobs and the way in which jobs are described in both of our systems. So these things are moving together.

We are pleased that the educational system is joining with the Department of Labor in this Secretary's initiative. So we see some possibility of some improvements there.

Mrs. NORWOOD. We have also been engaged in some preliminary discussions within the Department about the possibilities of doing some pilot work with employers to try to find out what they really are finding they have to do with training.

There is no really hard information on what training is done in a business establishment and how employers find out that they need to train and how much money they spend on training, for example. We are discussing with the Employment and Training Administration in a very preliminary way the possibility of a pilot survey to see whether this is the sort of thing that we could be helpful in.

Representative SCHEUER. You know, on this subject, as long as you're talking to Bill Brock, you might want to talk to Marc Tucker. I believe Marc Tucker was the executive director of that survey. You will remember that we had a set of eight or nine hearings here on what we need to do to improve the competitiveness of the American work force, and Marc Tucker helped us design those hearings. He helped us put together our witness list, including Bill Brock and Ray Marshall and a number of people who several years later ended up being deeply involved in the Carnegie Report. I would think if you chatted with him for a bit, you would find him an enormous source of insight and information.

Anyway, this a very critical area. It seems to me if we had structured ways for kids to segue from the world of study into the world of work that were pretty much formalized and institutionalized, involving a lot of summer work as they work their way up through secondary school before they got to their last year, the 12th grade, if we had structured formalized ways for them to, in effect, become summer apprentices, it seems to me that you might significantly narrow this discrepancy between blacks and whites, young black high school kids and young white high school kids, because we would be paying specific attention to the needs of transitioning black kids from the world of study to the world of work.

They wouldn't just be given a hunting license to find a job when they got out of school. It would be eased for them, it would be formalized for them and it would be structured for them, so that discrepancy might be reduced. And then taking the whole secondary school population, their employment also might become less subject to random swings in the economy.

Again, if really substantial portions of the high school community were to be in some kind of apprentice relationship with corporations over summers, that would be part of the basic overhead of the business community and not a variable that would swing sometimes wildly and erratically, depending upon fluctuations in the economy.

Am I going beyond the database that we have to justify these presumptions?

Mrs. NORWOOD. Well, I'm not really an expert on training, but what you say is quite fascinating. There certainly will be fewer young people, we know that, and therefore the jobs should be somewhat easier.

Representative SCHEUER. That's right. It should be somewhat less of a challenge.

Let me discuss the question of the labor market for recent high schools graduates, and really that's what we're talking about as much as anything else.

Last October you did a survey of the 2.5 million youths who were graduated from high school in 1989; 1.5 million of these went on to college. After last month's hearing you may recall Chairman Hamilton sent you a letter with questions on this subject and your reply is being made part of the hearing record.

Let me just go on to ask a question or two about these high school graduates.

What was the labor market experience of the million high school graduates who did not go to college last year? Did they have an easy or a hard time getting jobs, and was it easier or harder than for those who stayed in high school?

Mr. PLEWES. I think that we can characterize their transition as quite difficult. In fact, it's more difficult as we say it than it was 10 years earlier, and perhaps for many of the reasons that you talked about.

At the time we took the survey, about 85 percent were in the labor force. Now of that group the unemployment rate was about 14.7 percent. The rate for young men was 13 percent and for young women it was 16.9 percent.

I think that any advantage they might have had in job prospects from a reduced labor supply, the point the Commissioner was just making, was offset by a decline in the number of job opportunities for them. What I mean by that is that if you compare what happened between 1979, for example, and when we took this survey in 1989, many fewer jobs in manufacturing were available for young folks, and many of the kinds of jobs that high school graduates just stepped into that were reasonably good for transition are just no longer existing given the service sector growth.

If you look at black youth, black high school graduates, their unemployment rate was still quite high in 1989.

Representative SCHEUER. Graduates you're speaking of.

Mr. PLEWES. High school graduates during this time period in the survey, their unemployment rate was still quite high, it was about 22 percent, but 10 years earlier it had been much higher. So what one can draw from that picture is that a black youth with a high school education, though still much worse off than a white youth, had shown over that 10-year period some improvement.

So there is at least a bit of a silver lining to this report, but still the fact is that black young people had a rate still much higher than other young people even as high school graduates. The whites had shown no improvement, and we see that tied a bit to declines in manufacturing and in other sectors in which high school graduates traditionally find their first jobs.

Representative SCHEUER. Well, I think that is a slight ray of hope if over that decade the employment record of black high school youth who received their high school diplomas was significantly better than those black high school youth who dropped out along the way. While the situation is far from perfect, and while our society has a long way to go to remedy the problem by reducing the discrepancy between black high school graduates and white high school graduates, at least as far as the individual black high school graduate is concerned, there is a lesson there that he is going to do a hell of a lot better than his friends who dropped out of school if he hangs in there and acquires skills that the job market will respect and will compensate him for.

Mr. PLEWES. That's right.

Representative SCHEUER. So while there is a hell of a long way to go in terms of eliminating this discrepancy between black and white high school graduates, still the black high school graduate has to see a far more promising picture if he finishes high school, and that is precisely the message that we're trying to send him.

The release reports that about 450,000 youths dropped out of high school last year and that we now have a total of about 4 million dropouts between the ages of 16 and 24; 4 million is a big figure. What kind of opportunities do these young people have in the labor market? Is there anything encouraging that you can say about the labor market situation for high school dropouts, or is the signal a pretty bleak one in which you would say if you do not graduate from high school and employers cannot be sure that you have reading, writing, accounting and processing information skills, your job prospects are really quite awful?

I mean it seems to me that is the signal that young black people, Hispanic people and white people for that matter ought to understand, that the promise of a decent, independent, satisfying, and rewarding life is vastly reduced if they don't get a high school education.

But I don't want to put words in your mouth. What can you tell us about the labor market situation for high school dropouts?

Mrs. NORWOOD. You're absolutely correct that the situation is extremely bleak for those people who do not have at least basic educational attainment and, in my view, it's going to get worse because at least our projections of the future and most of the others that I've seen, most of which, by the way, are based on our projections, suggest that demand for workers in the future is moving now and is going to move even more so in the future toward the occupations that require greater training.

Now some of that training is done in school and some of it is done in the business establishments, but the basic educational attainment of the workers is essential for that I think. Furthermore, there is going to be much greater competition for the jobs that do

not require special training and, therefore, it will be much, much harder for that group of dropouts to survive.

Representative SCHEUER. Yes. Did you want to say something?

Mr. PLEWES. I was just going to add some additional facts to this. Among dropouts the unemployment rate was double that of those who graduated. So we talked earlier about rates for those who graduated being quite high. Just double those, and that's the rate for dropouts.

Representative SCHEUER. That's a powerful statistic.

Mr. PLEWES. At every level the jobless rate for blacks was twice that of whites. So if you take high school dropouts having twice the rate as high school graduates and blacks having twice the rate of whites you can begin to draw a picture of the difficulties especially that young black dropouts have in the labor market.

There is another point, too, that I guess should be made also. We have been talking about people who are in the work force, who have made themselves available for work, who are actually seeking work and not finding it. If you look at female dropouts, less than half of them are even in the work force looking for work and so forth. Many of them, of course, have family responsibilities and other kinds of situations which contribute to their dropping out, but they aren't even in the work force. They are just out of the picture entirely in many cases, and that's a special kind of group I think that needs some special attention.

Representative SCHEUER. I think Marc Tucker and Ray Marshall and Bill Brock and some of their colleagues from the Fortune 500 testified several years ago that in New York three-fourths of the jobs that will be created during the decade of the 1990's, this decade, that three-fourths will require some postsecondary education, and that only 10 percent of the black and Hispanic youth in the job market are qualified for those jobs. So this is the classic job gap.

The corporations are chasing 10 percent of the minority young people for 75 percent of their job needs, whereas for the 25 percent of the corporate culture jobs that don't require literacy skills, processing information skills and in effect some of that postsecondary education, for the 25 percent of them that don't require that, 90 percent of the black youths are chasing 25 percent of the jobs, and the corporations are chasing 10 percent of the black young to fill the 75 percent of their jobs that do require those skills and do require some secondary education.

So you have a tremendous gap between the job requirements of the corporations and the skills that the young people have to offer. That's a very, very painful prospect.

Do you have any insight on what's happening to employment and unemployment in my State of New York?

Mrs. NORWOOD. We do. Over the past month in August, that is from July to August, there was really very little change in the employment situation. The unemployment rate has held fairly steady at 5 percent, and though employment is leveling off in many areas, there has not been the large increase in unemployment that we've seen in some other States. That doesn't mean, of course, that every area within the State is in the same situation, but the State itself has had a good bit of stability over the last year and last month.

Representative SCHEUER. Well, actually New York State as a State has performed very, very well and better than the national average.

Mrs. NORWOOD. Yes, it has.

Representative SCHEUER. But it's a differentiated picture, as you very well know, and while the overall statistics might be good, the statistics for black males who are dropouts are really awful.

Mrs. NORWOOD. I would agree with that.

Representative SCHEUER. Pardon.

Mrs. NORWOOD. I would agree with that.

Representative SCHEUER. Our society just has to zero in and concentrate on that and learn whatever lessons we can from experience. We should learn the lessons that flow from the Carnegie Commission Report and try and pass some legislation and produce some programs specifically addressed to cutting off the growth of that subgroup in our society of young people who really face a lifetime of probably never having a real job and of floating from flipping hamburgers in one of the fast-food joints to washing dishes, car washing, and other low-skilled, low-paid jobs that do not provide the underpinnings for a very successful or rewarding life.

Do you have anything you would like to add, Commissioner?

Mrs. NORWOOD. No, sir.

Representative SCHEUER. All right.

Anybody? [No response.]

All right. With your indulgence, I will talk to the chairman and try and set aside some time next month for us to talk about some of the lessons that we can learn from that Carnegie Commission Report and what light your office has to shed on some of their recommendations. OK?

Mrs. NORWOOD. Fine.

Representative SCHEUER. We appreciate your coming very much, and the hearing is adjourned, subject to the call of the Chair.

[Whereupon, at 10:28 a.m., the committee adjourned, subject to the call of the Chair.]

[The following letter, together with an enclosure, was subsequently supplied for the record:]

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

SEP 14 1990

Honorable James H. Scheuer
House of Representatives
Washington, D.C. 20515-3208

Dear Congressman Scheuer:

I appreciated the opportunity to testify before you during my monthly testimony on the employment situation last Friday. The discussion of issues of school-to-work transition and the labor force status of minority youth addressed problems of considerable importance.

During the testimony, you expressed an interest in the Secretary's Commission on Achieving Necessary Skills, which Secretary Dole formed to improve the skills of young persons entering the workforce. The Commission is chaired by Secretary Brock, and has membership from business, labor, and the public sector. The enclosed flyer summarizes its mission and approach.

If the Bureau of Labor Statistics can be of further assistance to you, please let me know.

Sincerely yours,

JANET L. NORWOOD
Commissioner

Enclosure

cc: Bill Buechner

SCANS

Secretary's Commission on Achieving Necessary Skills

"Throughout America's history, the key that has unlocked tomorrow's door of opportunity has been found in our school-houses. Today, however, many of our young people are discovering that the locks have been changed." These are the words that U.S. Secretary of Labor Elizabeth Dole used when she formed the Secretary's Commission on Achieving Necessary Skills or SCANS.

SCANS was established on February 20, 1990 to help the nation fashion a new key. The search begins by defining the skills needed to succceed in the new economy.

The Commission will define skills that:

-o- Are needed to gain access to career ladders.
-o- Are generic and cut across job levels and classifications.
-o- Can be defined, taught and assessed.

SCANS will identify generic workplace abilities that all high school graduates need if they expect meaningful employment. SCANS' contribution to the ongoing national debate on reform in education will be confined to delineating those skills, recommending assessment tools, and proposing levels to describe attainment levels needed for good and productive employment.

The Honorable William E. Brock accepted Secretary Dole's invitation to chair the Commission which is composed of thirty distinguished leaders - thirteen from business, six from labor and eleven from state government and education.

The work of the Commission is supported by a small professional staff and two contractors - Research Evaluation Associates for logistics and Pelavin Associates, Inc. for technical support and research. Dr. Arnold H. Packer serves as the executive director.

SCANS is divided into the five task forces, shown on the opposite page, that represent the various segments of our economic system. The task force chairs along with three members at large serve as a steering committee to plan the work of the Commission. In addition, ad hoc groups composed of Commissioners as well as others not on the commission have been formed to look at cross-cutting issues. The ad hoc groups are education, labor, technology, assessment and dissemination.

THE CHARGE

The charge to the commission is four-fold:

Recommend the skills required by high school graduates to achieve work readiness, including such areas as critical thinking, reading, communicating, and listening skills and adapting through math, science and other disciplines to today's new workforce complexities

Suggest the most effective ways to measure individuals' abilities, with special attention to the potential of computer technology and

Propose acceptable levels of proficiency

Propose options for dissemination of skills guidelines and the measurement techniques by business and trade groups, unions, schools and education associations, and federal and state governments.

TASK FORCE ASSIGNMENTS

William E. Brock, Chair

(1) Manufacturing, Construction, and Agri-business.

*James D. Burge (Business)
William H. Gregory (Business)
** Joan Patterson (Labor)
Frank P. Doyle (Business)
Charles E. Bradford (Labor)
Thomas G. Sticht (Education)

(2) Health and Human Services (e.g. day care, education)

* Gabriel Cortina (Education)
Thomas W. Chapman (Business)
Gloria J. Conn (Education)
Edward Aguirre (Business)
Gary D. Watts (Labor)
Patricia L. Brockett (State)

(3) Office, Financial, and Government Services

* Walton E. Burdick (Business)
Badi G. Foster (Business)
Lauren B. Resnick (Education)
**J. Veronica Biggins (Business)
Gerald Whitburn (State)

(4) Accommodations (e.g. hotel, food), and Personal Services

* Richard E. Rivera (Business)
Steffen Palko (Education)
Dale Parnell (Education)
Roger D. Semerad (Business
Yvette Herrera (Labor)
Maria Tukeva (Education)

(5) Trade, Distribution, and Communication.

* Bruce Carswell (Business)
Madelyn P. Jennings (Business)
James P. Black (Education)
Jay H. Foreman (Labor)
** John Zimmerman (Business)
Sharyn Marr Wetjen (Education)

* Task Force Chair and Steering Committee Member
** At-Large Member - Steering Committee

Points to ponder

In the next decade America will choose between:

-o- A high-skill, high-wage, high-productivity **Workforce 2000 OR** a continued decline in average wages (Since 1969, real average weekly earnings fell by 12% .)

-o- A restructured education system that is internationally competitive **OR** one that comes in 14th in international comparisons.

-o- Meeting the education goals agreed to by the President and the Governors **OR** continuing with today's dropout rate (25%) and functional illiteracy (25 million workers).

-o- A growing gap between the "Forgotten Half" who do not go on to college **OR** reversing the fall in their average wages (male high school graduates wages fell by 28% between 1973 and 1986).

-o- A competitive economy that serves all our citizens **OR** one that leaves over 20% of our youngsters in poverty with even higher rates among minority children.

COMMISSION MEETINGS SCHEDULE *

May 18, 1990
September 21, 1990
November 29, 1990
January 18, 1991 (Chicago)
March 15, 1991

May 17, 1991
September 20,1991
December 6, 1991
February 21, 1992

* Meetings will be held in Washington, DC unless otherwise specified.

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36-591 (132)